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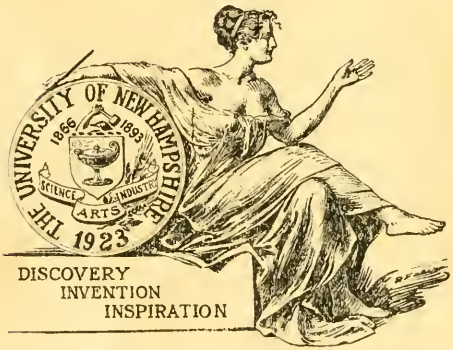

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Bulletin No. 222 June, 1926

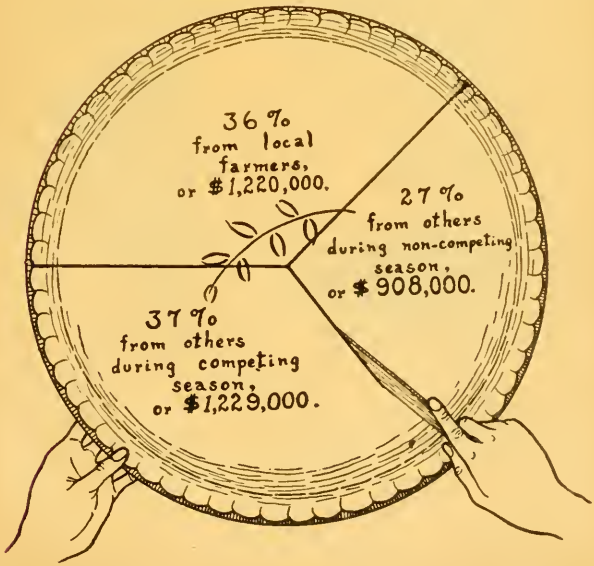
NEW HAMPSHIRE

AGRICULTURAL EXPERIMENT STATION

"CAN NEW HAMPSHIRE PRODUCE MORE OF WHAT SHE EATS?"

AN ECONOMIC SURVEY OF THE DEMAND FOR CERTAIN COMMODITIES AS INDICATED BY THE PURCHASES OF RETAIL STORES, HOTELS AND CAMPS WITHIN THE STATE

By H. C. WOODWORTH, L. B. LINCOLN
and H. I. RICHARDS



How New Hampshire Divides Up Her Store, Hotel and Camp Purchases of Garden and Field Crops

THE UNIVERSITY OF NEW HAMPSHIRE
DURHAM, N. H.

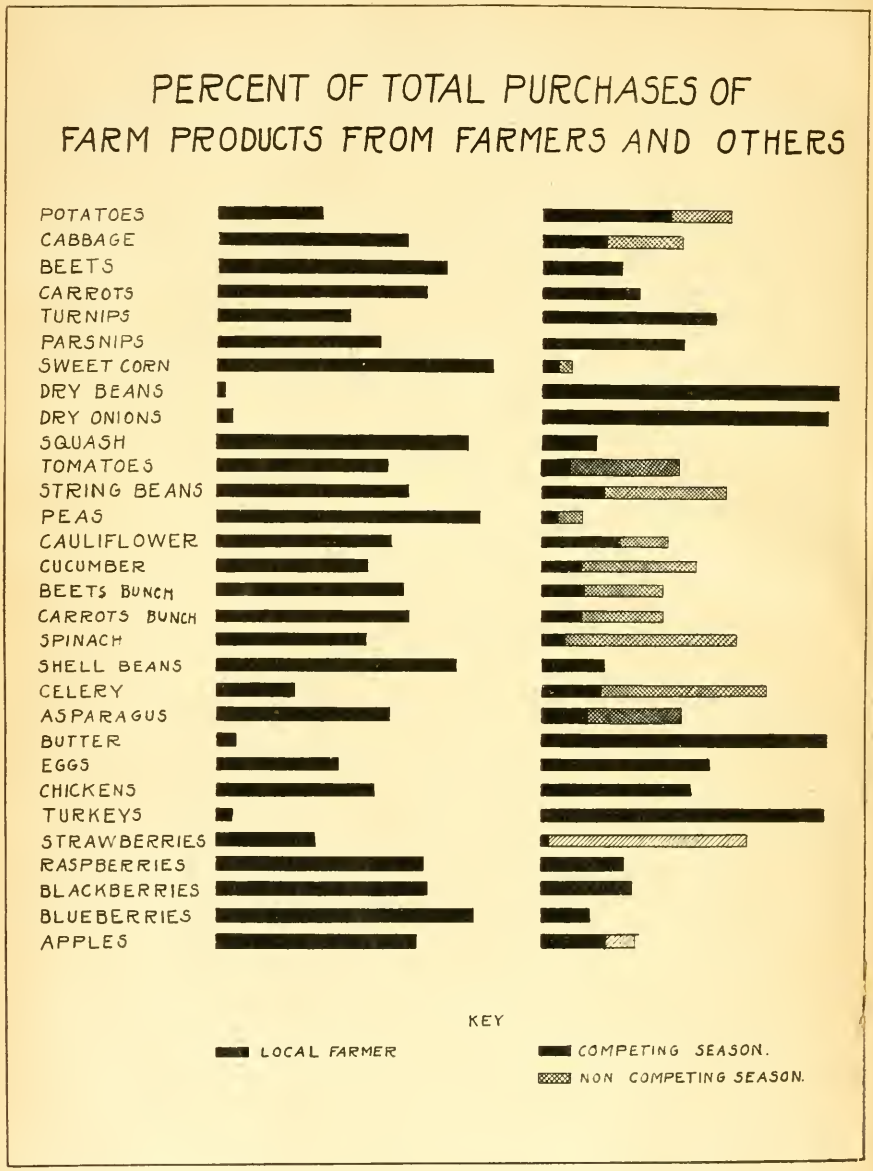


FIGURE 1—Local farmers furnish most of the beets, carrots, sweet corn, squash, peas, shell beans and blueberries purchased by stores, camps and hotels.

The bars on the left represent the purchases from local farmers; those on the right, which are divided into competing and non-competing season, represent the purchases from other than local farmers.

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SUMMARY

1. A personal survey was made of retail stores throughout New Hampshire in 1925 to determine what amounts of certain commodities are being bought outside the state.
2. The survey shows that New Hampshire ships in large amounts of vegetables, although in the case of many of these a high percentage is brought in during the non-competing season of the year.
3. Large amounts of potatoes are shipped into New Hampshire markets. It seems probable that an increased production of both early and late potatoes in most sections of the state could be marketed locally.
4. The demand for cabbage during the competing season is greater than the production, particularly in the northern counties.
5. The production of celery could be increased without over-supplying local markets.
6. The local markets of New Hampshire are nearly supplied by local production with beets, carrots, parsnips, peas, string beans, tomatoes and cucumbers during the competing season.
7. Local production of asparagus could be increased slightly and still only supply the local market during the competing season.
8. The local demand for tomatoes during the marketing season for tomatoes grown in cold frames is much larger than local production.
9. Hotels in the White Mountains buy most of their vegetables outside of the state.
10. Hotel demand for poultry and eggs in the White Mountains is much greater than local production.
11. Large amounts of dry beans, onions and butter are shipped in, but the advisability of local production on a commercial scale may be questioned.
12. Producers must give more attention to marketing problems.

"CAN NEW HAMPSHIRE PRODUCE MORE OF WHAT SHE EATS?"

An Economic Survey of the Demand for Certain Commodities as Indicated by the Purchases of Retail Stores, Hotels and Camps within the State

By H. C. Woodworth, Agricultural Economist, New Hampshire Agricultural Experiment Station; L. B. Lincoln, Assistant Economist, New Hampshire Agricultural Experiment Station, and H. I. Richards, Assistant Economic Analyst, United States Department of Agriculture

INTRODUCTION

The question which gives the title to this bulletin has been much discussed. Before it can be adequately answered, definite information is necessary on two fundamental points:

What foodstuffs possible of local production are being shipped into New Hampshire?

Of these foodstuffs which ones can advantageously be grown here with greater profit than our present uses of land and labor afford?

In an attempt to answer the first of these questions a state-wide survey was undertaken in the summer of 1925 as the first research project in rural economics made possible by the Purnell Fund.* The purpose of this bulletin is to give the results of this survey and to discuss, so far as our present knowledge goes, the second question raised above in the light of these findings. So many diverse factors enter into this latter problem that more detailed commodity studies will, in many cases, be advisable. The present study has been planned only to give the general picture. It has been necessary to leave many problems unsolved.

It is, in fact, surprising how little has been known as to the extent of our markets. With local farmers furnishing but a small portion of some commodities the stores become dependent upon outside sources and pay little or no attention to local supplies. This has created a condition where a farmer who raised about 2,000 pounds of beans each year was under the impression that even a slight expansion in bean-growing would flood the market and was surprised to learn that his town shipped in about 45,000 pounds.

How the Survey Was Made

The demand figures in this report are based largely on the summary of estimates secured from retail stores, hotels and camps in every county of New Hampshire, and on the data received from railroad records as to freight shipments and receipts in large consuming centers. The study includes the following products:

* The survey has been made by the New Hampshire Agricultural Experiment Station in co-operation with the Bureau of Agricultural Economics of the United States Department of Agriculture.

Potatoes	Tomatoes	Asparagus
Cabbage	String beans	Butter
Beets (Cut)	Peas	Eggs
Carrots (Cut)	Cauliflower	Chickens
Turnips	Cucumbers	Turkeys
Parsnips	Beets (Bunch)	Strawberries
Sweet corn	Carrots (Bunch)	Raspberries
Dry beans	Spinach	Blackberries
Dry onions	Shell beans	Blueberries
Squash	Celery	Apples

Meat, milk, canned fruits and vegetables were not included in this study.

Stores

Practically all the retail stores in the state handling vegetables or fruit were visited and estimates obtained from proprietors as to amounts of each product shipped in and amounts purchased from local farmers.

In a few cases the desired information could not be secured, and the investigator made estimates for these stores by comparing with similar stores. While each of the 1,229 store records is an estimate, few stores having complete records, it is thought that the results obtained in summary fairly represent the situation. When checked with data from other sources such as railroad records, no large discrepancies appear.

Hotels and Camps

The hotels were visited and estimates secured as to products purchased from local farmers and from others. It was planned to secure records from all large hotels in the state, but while practically all of these were visited, we were unable to secure records from all the summer hotels before they closed for the season. In this case an adjustment was made in the final summary to cover hotel records not obtained. This was done by multiplying the total of each commodity by a correction figure which was worked out on the basis of total capacity of all operating hotels as compared to hotels where records had been obtained. Since the records obtained represented about 70 per cent of the total capacity of all the hotels, the corrected figure for purchases of all hotels is thought to closely represent the situation as to hotel demand. The purchases of very small hotels or small restaurants were not obtained because they buy practically all of their supplies from retail stores.

The state has many camps for boys and girls, and the number is rapidly growing. Estimates on purchases were secured from 35 camps, and from these the total purchases of all camps were estimated on the basis of capacity. Since these camps are usually located in inaccessible or isolated places the estimates were secured by correspondence.

Seasonal Distribution

The seasonal distribution of receipts throughout the year was obtained by analyzing the actual purchases of a few retail stores and wholesale companies and freight records of receipts at a few important centers.

At Fabyan practically all receipts for a number of hotels came in by a special freight car and records of these receipts were obtained and

summarized to study when the different commodities were purchased. Daily records of purchases were also obtained from retail stores, in Nashua, Concord, and Littleton and wholesale companies in Manchester and Portsmouth. These records were then tabulated by weeks and plotted on graph paper. These graphs showed the trend of purchases from other than farmers very clearly for most products, but the weekly purchases were irregular since individual stores often buy sufficient supplies of many farm products to last more than a week. From the data obtained it seemed evident that if actual weekly records could be obtained from all stores, the graph would resemble a smooth curve. A smooth curve was therefore fitted to these data with an area inside the curve equal to the actual record of purchases. Weekly percentages of total yearly purchases from other than farmers were then obtained for these trend figures. These weekly percentages were then multiplied times the total purchases from other than farmers as obtained from retail stores. This method, it is believed, should give a close approximation of the seasonal distribution; but it should not be taken as an accurate record of weekly purchases.

SEASONAL DISTRIBUTION OF STRAWBERRY PURCHASES FROM OTHER THAN LOCAL FARMERS, BY SEVERAL NEW HAMPSHIRE STORES AND WHOLESALE COMPANIES, 1925

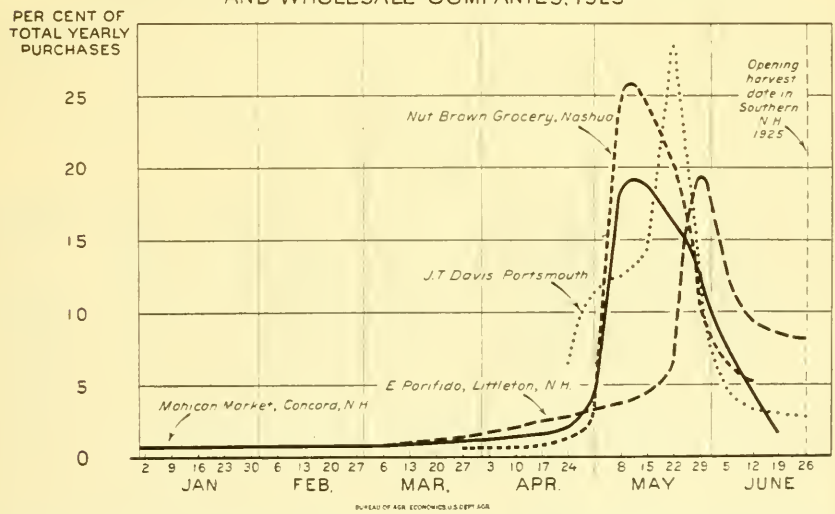
PER CENT OF TOTAL YEARLY PURCHASES
25
20
15
10
5
0
Opening harvest date in Southern N.H. 1925
Nut Brown Grocery, Nashua
J.T Davis Portsmouth
E Porifido, Littleton, N.H.
Monicon Market, Concord, N.H
2 9 16 23 30 6 13 20 27 6 13 20 27 3 10 17 24 8 15 22 29 5 12 19 26
JAN FEB. MAR. APR. MAY JUNE

FIGURE 2—Curves such as this, representing actual purchases of commodities by certain stores, were used to estimate the time of shipping in products.

Railroad Records

The sources of these food products purchased outside the state were determined by analyzing the railroad freight records at Berlin, Laconia, Concord, Manchester, Nashua, Dover and Keene. These are the principal wholesale centers in the state, and the source of receipts coming into these cities should represent very closely the source of receipts for the entire state. The freight shipments were also used to check on the total purchases of imports in the case of a few commodities.

In addition to freight receipts, considerable amounts also came in by express and motor truck. It was impossible to get any reliable records on the amounts shipped in this way.

Definition of Terms

"Purchases" of farm products will be understood in this bulletin to mean the purchases of retail stores, hotels, large restaurants and boys' and girls' camps, as obtained in the survey.

"Competing season" means the season during which local products can be sold on the local market with the usual methods of production and storage.

"Non-competing season" means the season when local products are not available for sale on the local market with the usual methods of production and storage.

THE STATE SITUATION

Agriculturally, New Hampshire is not self-supporting. With a large industrial population, small amounts of tillage land and short growing season, she consumes a much larger quantity of food than she produces. Apples, whole milk, eggs and chickens she ships out in large quantities, but in the case of all other commodities she imports more than she ships out.*

The amount of farm products coming into the state, however, does not give any indication as to whether local farmers should produce these commodities. It merely indicates the size of local markets and the amount that local producers can increase their production without apparently having to ship out to other markets. Whether or not the farmer should produce a larger supply to meet the local demand is a separate question in the case of each commodity.

The summary figures, of course, do not indicate total consumption, since many farmers sell direct to consumer and since many consumers have their own gardens. Neither do they include the large amount of products sold as canned goods which are practically all shipped in.

Of the approximately $3,357,000 in purchases of vegetables and field products by retail stores and hotels, $1,220,000, or 37 per cent, was paid to local farmers, and $2,137,000, or 63 per cent, was paid to others. (See Figure 1.) In money value the outstanding imports are butter $2,805,000, potatoes $656,000, chickens $339,000, dry beans $330,000, asparagus $165,000, strawberries $294,000, and dry onions $200,000.

The records of shipments in and of purchases from farmers for the various commodities in the state as a whole are shown in Table I, and the per cents of each commodity purchased from local farmers and from others are shown in Figure 1. From this chart it may be noted that over 94 per cent of the butter, dry beans, turkeys and dry onions purchased by stores and hotels were shipped in, and on the other extreme that 92 pm cent of sweet corn was purchased from local farmers.

The purchases from outside, however, in the case of some commodities

* There are a few instances of shipments within the state, but the amounts are believed to be small. The amounts of products reported as purchased from other than local farmers, but which may have been grown within the state, are difficult to estimate. It is definitely known that a few apples were shipped from Rockingham county to Lancaster merchants, that considerable sweet corn was trucked or expressed to the White Mountain region from Claremont and from Strafford county, and that a few cars of potatoes arrived on the Manchester market from northern New Hampshire.

do not present a fair picture of the home market possibilities for local farmers. The amount of certain products coming into the state during the season of the year when they can be supplied by local production with ordinary methods is the important factor. This amount is shown in the case of some crops under the heading "Competing Season" in Table I. The competing season may vary greatly from year to year, being affected by the season and by the adoption of new cultural practices, by location and soil. The separation of imports into amounts coming in during competing and non-competing season is intended here only as a rough approximation in order to more fully study the situation.

The difference in amounts of total imports and of imports during the local competing season illustrates the danger of encouraging local production on the former basis. Care must also be taken in pointing to the receipts of vegetables even during the competing season as a basis for increased production. These receipts may be during the early part of the harvest season; and since many vegetables such as tomatoes, cucumbers and string beans do not reach their maximum production until a week or more after harvesting begins, an increased acreage to supply the early part of the season would mean an oversupply on the market later.

TABLE I—*Purchases of agricultural products in the State of New Hampshire by retail stores, hotels and camps from farmers and from others in 1925, during competing and non-competing season*

Commodity	Unit	Amounts of purchases				Estimated value of purchases			
		From farmers	From others			From farmers	From others		
			Total	Competing season	Non-competing season		Total	Competing season	Non-competing season
Potatoes	Bus.	223,560	435,460	304,240	131,220	$313,000	$656,000	$426,000	$230,000
Cabbage	Bbls.	25,160	14,950	8,760	6,190	63,000	44,000	22,000	22,000
Beets	Bus.	9,853	3,463	3,463	.....	16,000	6,000	6,000	.....
Carrots	Bus.	13,076	6,129	6,129	.....	20,000	9,000	9,000	.....
Turnips	Bus.	10,165	13,641	13,641	.....	13,000	17,000	17,000	.....
Parsnips	Bus.	3,824	3,295	3,295	.....	7,000	6,000	6,000	.....
Sweet corn	10 doz.	35,127	3,469	2,000	1,469	70,000	7,000	4,000*	3,000*
Dry beans	100 lbs.	815	39,271	39,271	.....	7,000	330,000	330,000	.....
Dry onions	100 lbs.	2,729	48,015	48,015	.....	11,000	200,000	200,000	.....
Squash	100 lbs.	9,963	2,156	2,156	.....	48,000	10,000	10,000	.....
Tomatoes	Bus.	20,617	16,726	3,288	13,438	35,000	73,000	6,000	67,000
String beans	Bus.	9,278	5,756	1,475	4,281	13,000	12,000	2,000	10,000
Peas	Bus.	9,705	1,604	800	804	29,000	6,000	3,000*	3,000*
Cauliflower	Boxes	7,362	5,527	3,316	2,211	11,000	12,000	6,000*	6,000*
Cucumbers	Bus.	12,306	12,515	3,406	9,109	12,000	30,000	3,000*	27,000*
Beets (bunch)	Doz. bunches	32,740	21,655	8,165	13,490	25,000	19,000	6,000	13,000
Carrots (bunch)	Doz. bunches	29,653	19,465	6,655	12,810	22,000	18,000	5,000	13,000
Spinach	Bbls.	6,898	12,283	1,200	11,083	14,000	24,000	2,000	22,000
Shell beans	Bus.	4,408	1,201	1,201	.....	6,000	2,000	2,000	.....
Celery	Crates	8,829	25,707	6,951	18,756	29,000	84,000	23,000	61,000
Asparagus	Doz. bunches	52,813	43,055	14,361	28,694	158,000	165,000	50,000	115,000
Butter	Tubs	6,904	103,882	103,882	.....	186,000	2,805,000	2,805,000	.....
Eggs	Cases	62,829	82,035	82,035	.....	942,000	1,230,000	1,230,000	.....
Chickens	Lbs.	966,453	969,840	969,840	.....	338,000	339,000	339,000	.....
Turkeys	Lbs.	13,987	255,547	255,547	.....	7,000	128,000	128,000	.....
Strawberries	Crates	14,273	29,730	1,138	28,592	100,000	294,000	8,000	286,000
Raspberries	Crates	649	246	246	.....	9,000	3,000	3,000	.....
Blackberries	Crates	521	227	227	.....	4,000	2,000	2,000	.....
Blueberries	Crates	12,070	1,924	1,924	.....	77,000	12,000	12,000	.....
Apples	Bus.	86,476	38,296	26,530	11,766	108,000	96,000	66,000	30,000
Total estimated value						$2,693,000	$6,639,000	$5,731,000	$908,000

*Competing season not clearly defined on these crops.

Then, too, it must be remembered that the shipments into the state during any one year indicate only the situation as to demand at the prevailing price of that season. The demand might have been much greater had the price been lower. This is especially true where the fresh vegetables have strong competition in canned products.

The quantity of products shipped into a state, however, is only one measure of the difference between local production and local consumption. Quality is another measure that is often very important. Local producers may be able to obtain a higher price for their best grade and quality of product in outside markets than local consumers are willing to pay. Eggs, of very high quality, for example, are being shipped out of some communities in the state at the same time that eggs of a lower grade are being shipped into those communities. The difference in price obtained from these two methods of sale justifies their shipment into and out of a market at the same time. In other cases the quality of products demanded by local consumers is higher than that supplied by local producers; and retail stores and hotels catering to this demand are compelled to order the quality of products that they want in outside markets. In making adjustments of local production to local consumption we shall, therefore, have to consider the quality of products demanded.

Bearing these reservations in mind, the results of the survey may be considered by commodities.

For purposes of discussion the state has been divided into seven districts as shown in Figure 3:

District 1, or Upper Coos, includes the upper part of Coos county including Berlin and Gorham. This district has a short-growing season. Wholesale fluid milk and potatoes are the chief sources of income.

District 2, or White Mountain, includes southern Coos county and northern Grafton county. Wholesale milk is the chief source of income.

District 3, or Lake Region, includes Carroll and Belknap counties, also the Pemigewasset Valley in Grafton county. A region of small farms. A large summer population.

District 4, or Sullivan, includes Sullivan county and southern Grafton county. A region of general farms, wholesale milk being the major enterprise.

District 5,* or Cheshire, includes Cheshire county, a region of small farms.

District 6, or Merrimack Valley, includes Hillsboro and Merrimack counties and the western half of Rockingham county. These districts contain the three largest cities of the state. An area of small general farms; dairying, poultry and fruit.

District 7, or Coast, includes Strafford county and the eastern half of Rockingham county. A region of small general farms; dairying, poultry and fruit.

The market demand for each product will be considered separately by districts. In the case of the White Mountains, where a special problem is presented, separate treatment will be given.

* Records for this district were taken from Cheshire county survey by H. I. Richards and H. A. Rollins, New Hampshire Station Bulletin No. 217 except for butter and dry beans which were estimated from Sullivan county.

FIGURE 3—The state was divided into seven districts.

Some discussion will be attempted in each commodity as to production, although the lack of definite information will necessitate only very general statements.

For the state as a whole, potatoes, some cabbage and celery, and large amounts of dry onions and dry beans are shipped in during the time local products could be marketed. In the case of other commodities the production and consumption show a very delicate balance and any increase in production would probably oversupply the local market. However, in the case of certain markets the local growers seem to be furnishing a larger per cent of products used than in other markets, a condition which suggests that skilled vegetable gardeners may find opportunities around certain cities. For instance, Dover seems to be supplied better than most cities with local celery and asparagus. A few men in the vicinity of that city make a specialty of these crops. A study of the records for different cities, which are given in the appendix, suggests that this same opportunity exists around other towns.

Then, too, in order to have the real situation well in mind, it is important to realize that there are large cities just over the line in Massachusetts, Haverhill with 54,000 people, Lowell with 113,000 people and Lawrence with 94,000 people within easy trucking distance of many southern New Hampshire growers.

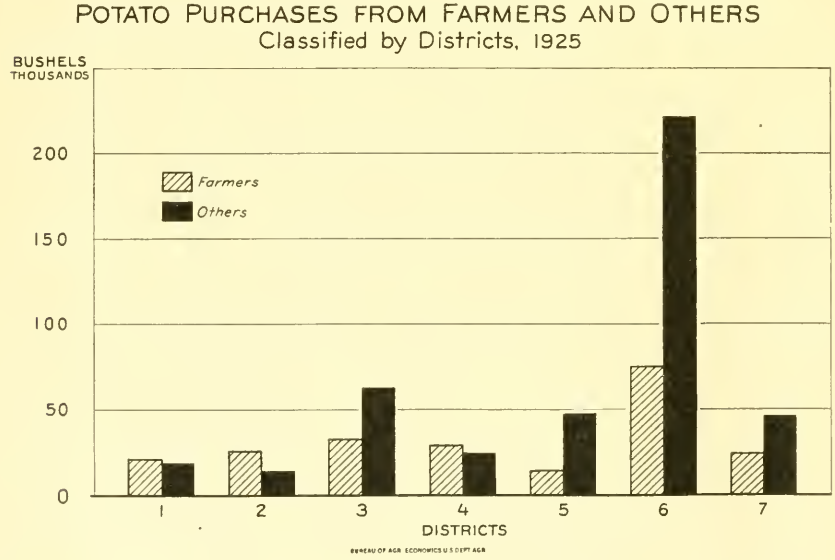

FIGURE 4—The Merrimack Valley (District 6), Cheshire (District 5) and Coast (District 7) depend largely on shipped-in potatoes.

POTATOES

Perhaps the most outstanding figures in the records are those of potatoes. As shown in Table II, 435,460 bushels of potatoes were purchased from other than local farmers, as compared to 223,560 bushels purchased from local growers. Of the potatoes imported 131,220 bushels, or 30 per

cent, were purchased during June and July, the non-competing season.*

TABLE II—*Potatoes—purchases from retail stores, hotels and camps from farmers and from others*

District	Potatoes (bushels)				
	From farmers	From others			
		Total	June and July	Aug. and Sept.	Oct. to May
1. Upper Coos	21,150	18,630	2,830	470	15,330
2. White Mt.	26,340	14,050	3,890	2,410	7,750
3. Lake Region	32,890	62,720	23,960	14,000	24,760
4. Sullivan	29,280	24,700	7,610	1,900	15,190
5. Cheshire	14,050	47,840	14,790	3,770	29,280
6. Merrimack Valley	75,660	221,430	57,700	31,160	132,570
7. Coast	24,190	46,090	20,440	5,510	20,140
Total	223,560	435,460	131,220	59,220	245,020

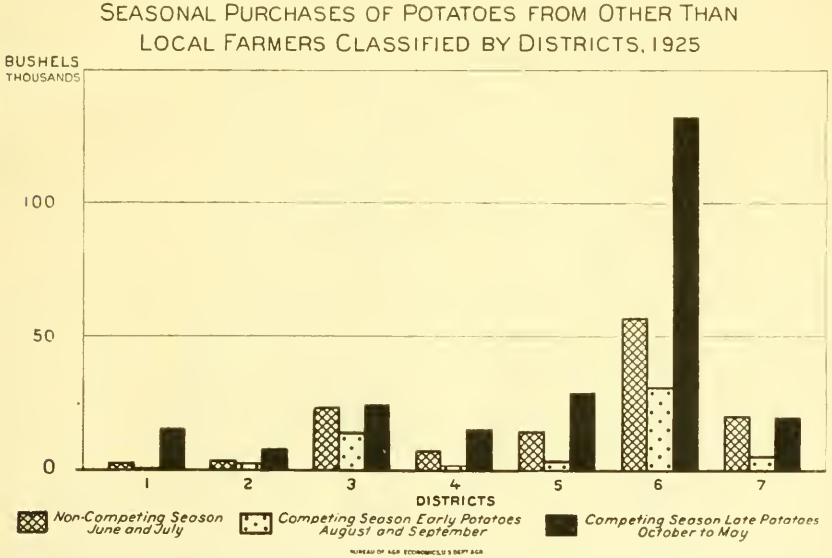

FIGURE 5—The Merrimack Valley (District 6) would seem to be an outstanding potato market for both early and late potatoes.

These new potatoes come mostly from Virginia, New Jersey and New York. Thirteen per cent, or 59,220 bushels, were purchased from other than local farmers during August and September in competition with our early potatoes. They come mostly from Virginia, New Jersey and Maine. From October to May the purchase of imported potatoes in competition with locally grown late crops amounted to 245,020 bushels, or 57 per cent of total purchases from others.

The Merrimack Valley district shipped in 31,160 bushels of potatoes during August and September in competition with local early potatoes,

* All the potatoes handled in June and July, however, are not early potatoes. Some old crop potatoes come in from Maine at this season.

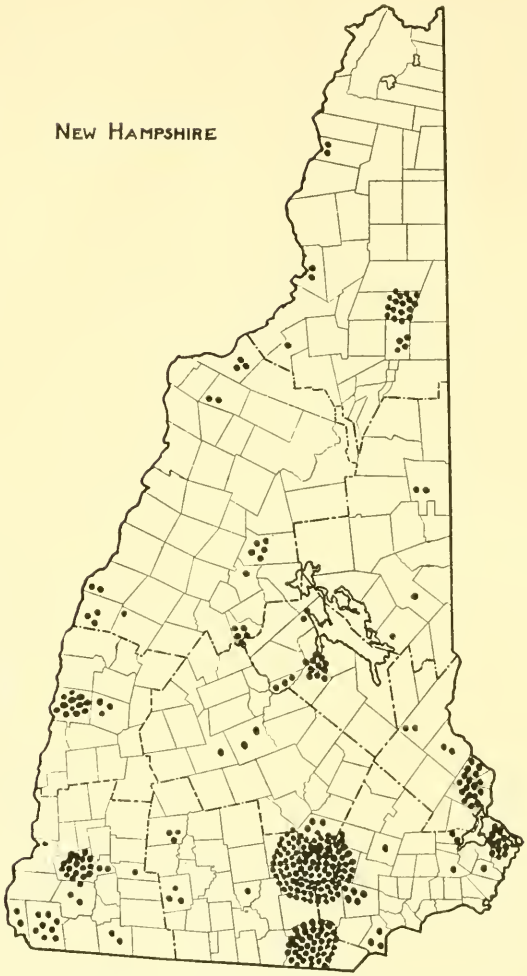

FIGURE 6—Map showing carloads of potatoes purchased from other than local farmers by stores, hotels and camps from October to May. (One dot equivalent to one carload.)

and 132,570 bushels from October to May inclusive* in competition with our late crop. Thus, the production of approximately 200 acres of early potatoes (yielding 150 bushels per acre) and 660 acres of late potatoes (yielding 200 bushels per acre) were shipped into this district during the competing season. Large quantities of potatoes are also shipped into other districts of the state. The coast area, district 7, imported over 5,000 bushels in August and September and over 20,000 bushels from October to May. Cheshire, district 5, shipped in nearly 3,700 bushels in

*From the railroad records it was found that in 1924, 23 cars of potatoes, or about 16,000 bushels, arrived in Manchester from New Hampshire shipping points.

August and September and over 29,000 bushels from October to May. The Lake region, district 3, shipped in 14,000 bushels in August and September and over 24,000 bushels in October to May. Even the Sullivan area, district 4, which is largely rural, shipped in 17,000 bushels during the competing season. The city of Berlin shipped in about 10,000 bushels from October to May. During the same period Manchester shipped in 60,000 bushels, Nashua 25,000, Concord 15,000, and Dover 10,000 bushels.

That the shipment in of potatoes is not a temporary situation in the year 1925 is shown by the regularity of potato receipts by freight in the larger cities as indicated in Table III, which shows the carlot receipts of potatoes by months for a period of six years on the Manchester market.

TABLE III—*Receipts of potatoes on Manchester markets, for a period of six years, by carloads*

Month	1919–20	1920–21	1921–22	1922–23	1923–24	1924–25
August	20	15	19	24	31	16
September	18	19	16	18	14	17
October	22	18	23	16	24	28
November	24	25	19	19	25	10
December	14	6	8	11	10	10
January	12	10	12	17	16	18
February	15	9	15	17	13	18
March	15	11	14	17	23	16
April	14	10	14	29	20	14
May	16	11	26	20	13	21
June	17	11	16	16	17	26
July	20	21	16	24	17	19
Total	207	166	198	228	223	213

The foregoing figures do not give an entirely accurate idea of the state situation. New Hampshire as a whole produces a larger amount of potatoes than the purchases show, but in the process of marketing, the surplus-producing areas such as Colebrook and Haverhill ship direct to Boston, while other areas especially in southern New Hampshire ship in potatoes from Aroostook county, Maine, and other surplus-producing regions. Producers in each of these areas consider this method of marketing the most profitable under present conditions. The adjustment of production to consumption within the state is therefore largely a marketing problem.

Carlot shipments from Maine to the seven districts for the period Sept. 12, 1923 to March 31, 1924 were as follows:

District 1	19 cars	District 5	40 cars
" 2	2 "	" 6	257 "
" 3	29 "	" 7	49 "
" 4	16 "		

From such estimates of the cost of production as are available, there is good reason to believe that, even excluding the high price season of 1925–1926, the New Hampshire farmer in deficiency-producing areas on a good farm, fully equipped with machinery and with good methods, should be able to produce potatoes with some margin of profit above cost, including wages at 40 cents per hour. One important factor is the use of labor at seasons when the present organization affords very little profitable use of time. On this account little extra labor need be employed in growing 10 acres of potatoes.

In the present surplus-producing districts of the state such as Colebrook and Haverhill, the farmers have little advantage in location as to markets over Aroostook county. Both must depend largely on Boston and other large markets, and the advantage in freight rates in favor of northern New Hampshire is only 10 cents per 100, or 6 cents per bushel. However, the

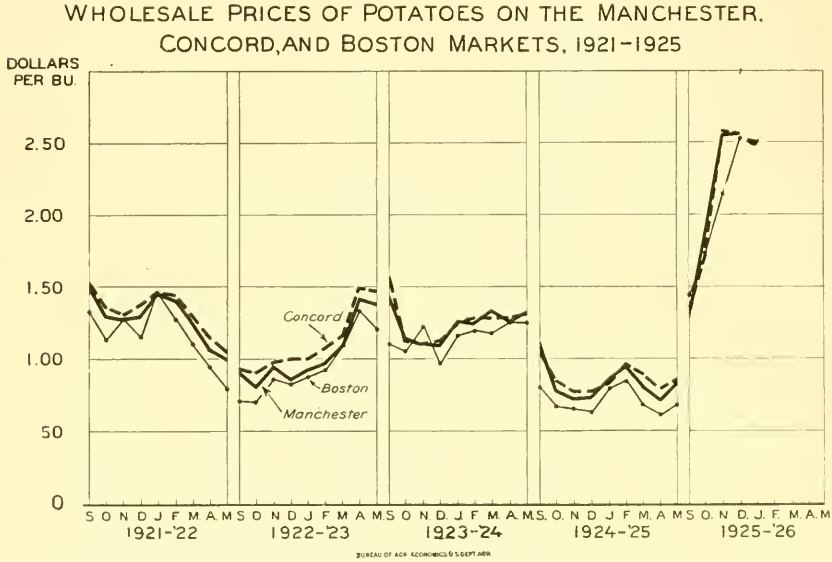
WHOLESALE PRICES OF POTATOES ON THE MANCHESTER, CONCORD, AND BOSTON MARKETS, 1921-1925
DOLLARS PER BU.
2.50
2.00
1.50
1.00
50
0
Concord
Boston
Manchester
S O N D J F M A M S O N D J F M A M S O N D J F M A M S O N D J F M A M S O N D J F M A M
1921-'22
1922-'23
1923-'24
1924-'25
1925-'26

FIGURE 7—The Concord and Manchester price of potatoes closely follows the Boston market. (Source of data, New Hampshire Weekly Market Bulletin.)

farmers in these areas are limited in crops that may be grown; and potatoes fit in with the organization of dairy farms and can usually be grown with little additional hired labor.

In the southern part of New Hampshire there is an advantage of about 40 cents per hundred in freight charges, as compared to Aroostook county, or about 24 cents per bushel; and there is further advantage in eliminating commission and other charges which the long distance shipper cannot well avoid.

On certain farms well located, with good potato soil, with favorable topography and reasonably free of obstructions, potatoes may be grown advantageously in New Hampshire. To what extent other farms can profitably grow this crop will require further inquiry in some detail as to cost of production under different conditions.

CABBAGE

Of the total purchases of cabbage by stores, camps and hotels, Table IV shows that 25,240 barrels, or 63 per cent, were from local farmers, and 14,950 barrels, or 37 per cent, were from others. Of the imported purchases approximately 6,190 barrels, or 41 per cent, were received during April, May and June, a non-competing season; 3,980 barrels, or 27 per

cent, in July, August and September in competition with local early cabbage, and 4,780 barrels, or 32 per cent, from October to May in competition with our late crop. In the northern part of the state a considerable amount of cabbage is imported. The Upper Coos district shipped in 3,070 barrels, or 90 per cent, of its purchases; the White Mountains district shipped in 2,210 barrels, or 74 per cent, and the Lake district, 2,670 barrels, or 50 per cent, of total purchases. The amounts shipped into these districts during the competing season of 1925 represent the average production from 13 acres of early cabbage and 14 acres of late cabbage, indicating that a few growers might well look further into this market. In southern New Hampshire, as indicated by districts 4, 5, 6 and 7, very little cabbage is shipped in during the competing season, and any marked increase in production would necessitate shipping out to other markets.

TABLE IV—*Cabbage—purchases by retail stores, hotels and camps from farmers and from others*

District	Cabbage (barrels)				
	From farmers	From others			
		Total	Apr. to June	July to Sept.	Oct. to May
1. Upper Coos	340	3,070	680	980	1,410
2. White Mt.	770	2,210	580	1,230	400
3. Lake Region	2,710	2,670	610	990	1,070
4. Sullivan	950	660	430	50	180
5. Cheshire	790	1,140	750	90	300
6. Merrimack Valley	10,390	3,770	2,470	300	1,000
7. Coast	9,290	1,430	670	340	420
Total	25,240	14,950	6,190	3,980	4,780

There seems to be a very great difference in the amounts of cabbage handled by stores in various towns. Berlin (see tables in appendix) storekeepers purchased 2,584 barrels of cabbage or 161 barrels per 1,000 population, shipping in 93 per cent. On the other hand, Claremont stores purchased only 22 barrels per 1,000 people; the stores of Manchester purchased 77 barrels per 1,000 people, of which 68 per cent were from local growers.

Cabbage receipts in New Hampshire cities from outside the state come largely from Boston. Most of the early cabbage received during the local competing season is produced in Massachusetts, while most of the late cabbage comes from both New York and Massachusetts.*

The price of cabbage in the Boston, Manchester and Concord markets for the last five years is shown in Figure 10. Manchester and Concord prices have averaged during this period much higher than Boston's wholesale prices. This is especially true of early cabbage, which is difficult to ship and store, and shows the advantage in price which local growers may expect to receive when they are able to deliver direct to the retailer. There has also been a steady downward trend in cabbage prices on the Boston market during the last five years which is not reflected in Manchester and Concord prices. The prices in these markets reflects very closely the amount of cabbage produced locally. Boston, of course,

* "Receipts and Sources of Boston Food Supply," by D. H. Goodwin, Mass. Dept. of Agri., Feb., 1925, Table IX.

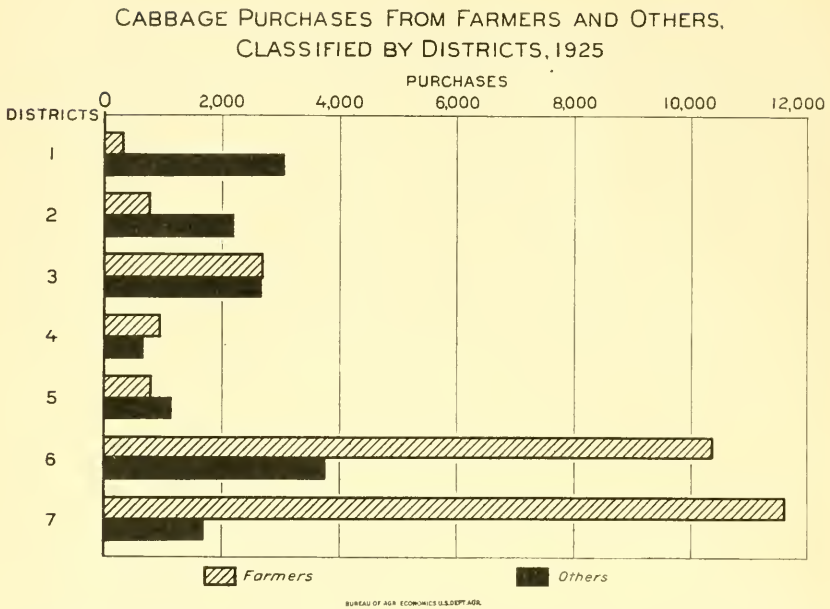

FIGURE 8—The farmers in southeastern New Hampshire, District 6 and 7, very largely supply the market demand for cabbage. Purchases show number of barrels.

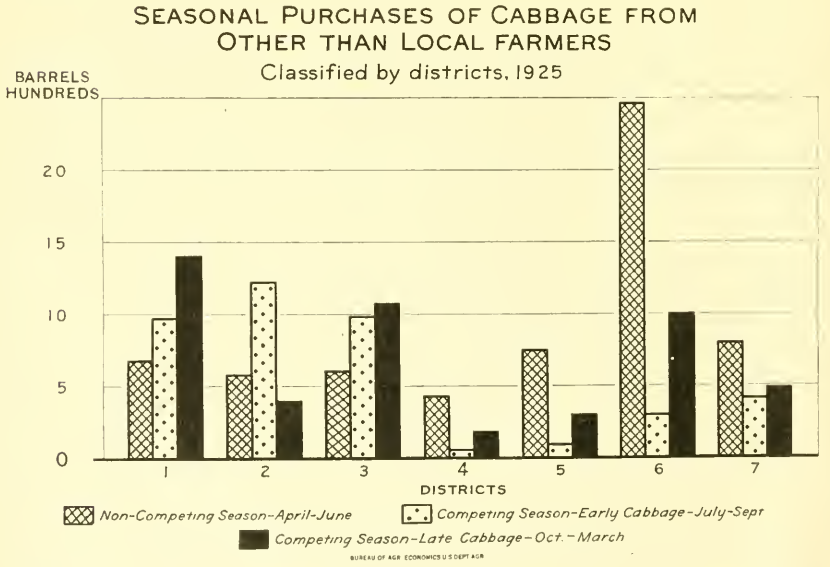

FIGURE 9—Northern New Hampshire, Districts 1, 2 and 3, ship in cabbage during the competing season.

furnishes an outlet for any surplus of local production over the demands of local markets that can be shipped in carload lots.

Poultry producers feed considerable amounts of cabbage to chickens, and would probably use much larger quantities if they could obtain it at Boston wholesale prices. The number of poultry growers in New Hampshire has increased rapidly during the last few years, and they should furnish a market for at least the poorer quality of cabbage raised, making it necessary to sell only cabbage of the best quality to retail stores.

Farmers in New Hampshire according to the U. S. Census produced 254 acres of cabbage in 1924. An increase of 39 acres to supply the entire deficiency of local production to meet local demand during the competing season for both early and late cabbage would therefore mean only a small addition to the total acreage. Any general expansion in production would soon necessitate shipping cabbage to outside markets at a lower price. It may be feasible for certain farmers, however, to grow cabbage for shipment to outside markets.

It must be remembered that this would bring our growers into direct

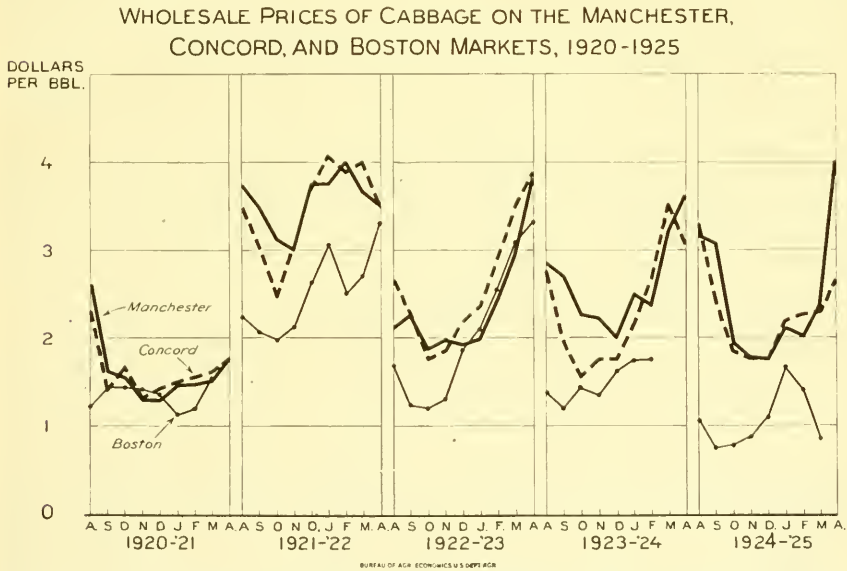
WHOLESALE PRICES OF CABBAGE ON THE MANCHESTER, CONCORD, AND BOSTON MARKETS, 1920-1925
DOLLARS PER BBL.
4
3
2
1
0
Manchester
Concord
Boston
A S O N D J F M A A S O N D J F M A A S O N D J F M A A S O N D J F M A A S O N D J F M A
1920-'21
1921-'22
1922-'23
1923-'24
1924-'25
BUREAU OF AGR. ECONOMICS U.S. DEPT. AGR.

FIGURE 10—The price of cabbage on the Manchester and Concord markets, while sensitive to the Boston market, is usually higher. (Source of data, New Hampshire Weekly Market Bulletin.)

competition with the late cabbage-producing centers in Massachusetts and New York, and over a period of years production costs would have to be very low.

But since certain markets are importing some cabbage during the competing season, the place of this crop in our farm organization and the cost of producing it become of interest. Cabbage, like potatoes, fits into a general dairy farm organization pretty well, as the peaks of labor requirements come in June and October, thus avoiding the haying season. In some cases the farmer's time could be better distributed than at

present by producing cash crops. While we may expect cabbage to fluctuate greatly in price, on the general dairy farm a small acreage could always be utilized as feed in a bad price year, thus eliminating the chance of complete failure due to price.

Very little data on cost of producing cabbage in New Hampshire is available, and any detailed discussion as to the costs or margins of profit even on good farms will have to await further study. The greatest opportunity in supplying the present demand would seem to be in the northern districts 1, 2 and 3. The early cabbage demand in the White Mountains and the late cabbage demand in Berlin may offer opportunities to a few farmers favorably situated.

DRY BEANS

The purchase of dry beans from local farmers as shown in Table V is insignificant. Of the nearly 40,000 hundred-pound sacks of beans purchased in the state, only 815 were produced locally. The 39,000 remaining sacks of beans, or 65,350 bushels, is equivalent to the production from 4,350 acres with a yield of 15 bushels per acre. Expressed in still a different way, about 100 carloads of dry beans from outside sources are required to supply the demand in our state.

Most of the dry beans received were produced in New York, Michigan or California. Bean production on a commercial scale has shifted to rather definite areas where the climatic conditions are especially favorable. Probably our climate is much too damp and cool at harvest time, and production on a large scale would involve much hand work in drying and curing vines. In very favorable districts like western New York, bean production with machinery requires only about 35 hours of man labor per

TABLE V—*Dry beans, dry onions, squash, and sweet corn—purchased by retail stores, hotels and camps from farmers and from others*

District	Dry beans (100 lbs.)		Dry onions (100 lbs.)		Squash (100 lbs.)		Sweet corn (10 doz.)	
	Farmers	Others	Farmers	Others	Farmers	Others	Farmers	Others
1. Upper Coos	....	3,193	....	3,709	178	286	2,627	211
2. White Mt.	62	1,825	114	3,088	285	404	1,256	1,542
3. Lake Region	188	6,478	129	6,423	686	707	4,565	358
4. Sullivan	159	3,127	55	3,676	649	127	2,348	599
5. Cheshire	31	1,576	454	3,170	602	82	1,845	209
6. Merrimack Valley	220	17,526	1,195	23,252	5,936	348	16,840	375
7. Coast	155	5,546	772	4,697	1,627	202	5,646	175
Total	815	39,271	2,719	48,015	9,963	2,156	35,127	3,469

acre. And since a product like beans can be stored and shipped in carloads very cheaply, it is doubtful if we can expect to meet the market demand by local production. However, a few men have been very successful in producing a small acreage of beans, by using a large area of barn space in drying and curing the vines.

It is of interest to note that the per capita consumption of beans as indicated by store purchases is very large, being for the state as a whole nearly 10 pounds. Berlin stores handled 1,578 cwt. or 10 pounds per

capita; Manchester, 5,825 cwt. or 7.7 pounds per capita. This compares with an estimated consumption of 6 to 7 pounds per capita for the nation as a whole.

DRY ONIONS

The purchase of dry onions by retail stores and hotels closely paralleled these purchases of dry beans. (See Table V). Many stores handled approximately 5,000 pounds of each. Of the 50,000 one-hundred pound sacks of onions purchased, 96 per cent, or 48,000, were shipped in. This is equal to the production of over 500 acres with an average yield of 200 bushels. Most of the onions shipped in were produced in Massachusetts and New York, although some come from Bermuda and southern states in crates.

The production of onions in Massachusetts has developed into a specialized industry employing much cheap hand labor. Such districts can produce so cheaply that it is doubtful if the New Hampshire farmer could afford to compete with this crop. At least it would be necessary to approach such districts in labor cost and use many of the methods in production that are employed there.

Moreover, onion production has in recent years suffered from overproduction due to available cheap labor in certain districts.

SQUASH

Local farmers evidently supplied most of the squash consumed in the state, since the stores and hotels (as shown in Table V) imported only 2,156 cwt., or 18 per cent of total purchases. The southern part of the state, as indicated by districts 4, 5, 6 and 7, ships in very little of this commodity; in fact it is believed that some squash is trucked to markets to the south. In the northern part of the state, as indicated in districts 1, 2 and 3, some squash is shipped in. Berlin (as shown in tables in appendix) imported 186 cwt., or 63 per cent of its total purchases, and Plymouth imported 120 cwt., or 54 per cent of its total purchases. Other towns imported only a small amount of squash, the large city of Manchester shipping in only 61 cwt. and Nashua only 7 cwt.

Any increase in local production of squash in southern New Hampshire must therefore be on the basis of shipping to outside markets, and since the squash market is periodically flooded, expansion in acreage is somewhat risky.

SWEET CORN

The purchase of sweet corn from other than farmers was found exceedingly small. (See Table V.) Probably much of that which is imported comes in before local farmers are able to harvest. Quarantine regulations prevent shipments from certain areas, and, no doubt, more out-of-season corn would be brought in if it were not for this. The summer hotels in district 2 ship in a large amount, much of which comes from Sullivan county where a few growers are making a specialty of early sweet corn.

It is interesting to note from the tables in the appendix that Claremont and Laconia shipped in no corn, and that Manchester shipped in 2,700

dozen, Nashua 200 dozen and Berlin 500 dozen, a very small part of the total purchases.

The demand for early sweet corn is shown in the high prices paid. The price the second week in August has averaged 35 cents for five years as compared to 18 cents for the second week in September.

Since considerable sweet corn is grown for canning factories there is usually a reserve supply available which has a tendency to keep the market stabilized. The factories can use the crop, so that there is no surplus, and if the price is exceedingly high some of this corn grown for the factory finds its way to the market.

BEETS, CARROTS, PARSNIPS AND TURNIPS

Since these crops are somewhat similar in production requirements and are interchangeable to some extent as to demand, they have been considered as a group. The purchases of these crops by retail stores and hotels from farmers and from others are shown in Table VI.

Of the 13,316 bushels of beets purchased, 74 per cent were from farmers and 26 per cent were from others. In the Merrimack Valley (district 6) the stores purchased 6,844 bushels, of which only 15 per cent were imported. The Lake district purchased 2,007 bushels through stores and hotels, of which 54 per cent were imported. It is of interest to note (see tables in appendix) that stores of Concord shipped in 414 bushels of beets, Nashua 35 bushels, Manchester 288 bushels, indicating that local farmers were supplying the demand. In fact the purchases of beets by bushels in any one town were not large.

TABLE VI—*Beets, carrots, turnips and parsnips—purchases by retail stores, hotels and camps from farmers and from others*

District	Beets (bus.) from		Carrots (bus.) from		Turnips (bus.) from		Parsnips (bus.) from	
	Farmers	Others	Farmers	Others	Farmers	Others	Farmers	Others
1. Upper Coos	287	344	278	820	1,073	2,807	10	120
2. White Mt.	529	427	614	453	1,082	763	163	437
3. Lake Region	923	1,084	1,008	1,577	1,132	2,498	236	450
4. Sullivan	718	352	577	844	481	408	163	432
5. Cheshire	429	134	494	334	715	408	241	160
6. Merrimack Valley	5,848	996	8,381	1,825	3,965	5,799	2,284	1,363
7. Coast	1,119	126	1,724	276	1,716	958	727	333
Total	9,853	3,463	13,076	6,129	10,164	13,641	3,824	3,295

Of the 19,205 bushels of cut carrots purchased, 68 per cent were from local farmers and 32 per cent from others. District 7 in southeastern New Hampshire shipped in only 276 bushels, or 14 per cent of the total purchases. On the other hand, Upper Coos county in district 1 shipped in 820 bushels, or 74 per cent of total purchases. District 3, or Lake area, shipped in 1,577 bushels, or 61 per cent of total purchases. The Merrimack Valley, district 6, shipped in 1,825 bushels, or 18 per cent of total purchases. The stores in Nashua shipped in only 72 bushels of carrots, Manchester 537 bushels, and Concord 596 bushels, while Berlin imported 719 bushels, which was 86 per cent of the total purchases. The local

production for the crop year 1924 did not fully supply the market, and there may be a chance for some expansion near certain centers.

Of the 7,119 bushels of parsnips purchased by stores and hotels 3,824 bushels, or 54 per cent, were from farmers and 46 per cent were from others. The northern part of the state, as indicated by districts 1, 2, 3 and 4 in Table VI, purchased 72 per cent of its total purchases from others. It would seem that local farmers are not meeting the demand in

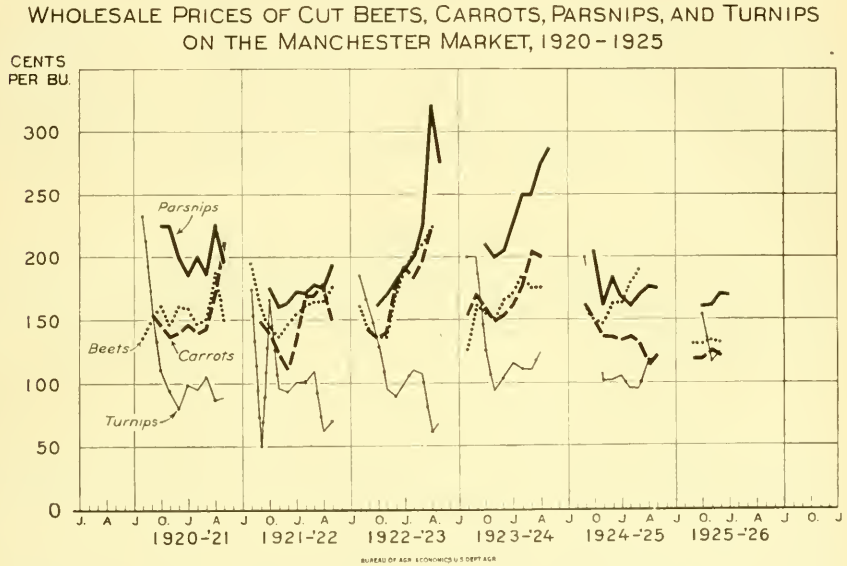

FIGURE 11—Carrots, beets, parsnips and turnips are seldom low in price at the same time.

these districts. However, the quantities shipped in are rather small, being 120 bushels, 437 bushels, 450 bushels and 432 bushels respectively in districts 1, 2, 3 and 4. In the southern part of the state local farmers furnish 53 per cent of total purchases. The Merrimack Valley, district 6, shipped in the largest amount, or 1,363 bushels. With the exception of Manchester and Concord, where the stores imported 339 and 552 bushels respectively, the shipments into any one city are very small.

Of the 23,805 bushels of turnips purchased by stores and hotels of the state, 43 per cent were from local farmers and 13,641, or 57 per cent, were from others.

The Merrimack Valley, or district 6, shipped in 5,799 bushels, or 59 per cent of its total purchases. This is equivalent to about 10 carloads or production from 20 acres. Upper Coos shipped in 2,807 bushels, or 70 per cent of its total purchases. District 3, or Lake region, shipped in 2,498 bushels, or 69 per cent of total purchases.

The purchase of turnips through stores seems to vary greatly in different cities. In the case of Manchester 3,992 bushels, or 90 per cent, were shipped in, while in case of Nashua only 191 bushels, or 11 per cent, were shipped in. Berlin shipped in 1,025 bushels, or 68 per cent of total pur-

chases. The one store at Lincoln purchased one car for use in lumber camps.

There is a deficiency of local production of turnips in every district, and some expansion in production could be made before supplying local demand. However, there seems to be some question in the minds of the retailer as to the quality of local products. Much of the turnips shipped in come from New Brunswick, and the average retailer interviewed seemed to prefer these on account of their reputation for good eating qualities.

Prices of these products on the Manchester market for the last five years show a striking similarity in yearly changes and direction of changes throughout the season. The average price for the last five years has been as follows: beets, $1.67; carrots, $1.55; parsnips, $1.96, and turnips, $1.25.

Expressed in terms of acreage required to produce the amount purchased from other than local farmers, with average yields, parsnips would require 13 acres, carrots 21 acres, beets 14 acres, and turnips 46 acres, or a total of 94 acres.

The production of beets, carrots, or parsnips cannot be increased very much without making it necessary to ship to outside markets at a considerably lower price than is now received locally. Any extensive expansion, therefore, must be estimated on the basis of Boston or New York markets minus freight and handling charges. This would necessitate very efficient production.

BUNCH BEETS AND BUNCH CARROTS

Of the total purchases of bunch beets, 32,740 dozen bunches, or 60 per cent, were from local farmers and 21,655 dozen bunches were from others. (See Table VII.) Of the latter only 8,165 dozen bunches were shipped in during the growing season. The largest importation during the competing season was in northeastern New Hampshire, as indicated by district 3 in Table VII. While the amounts of bunch beets shipped in are not large in any one city, the great variation in different cities is worthy of notice. Of the beets handled by stores and hotels, Plymouth purchased 1,787 dozen bunches, or 73 per cent, outside; Newport, 4,560 dozen bunches, or 71 per cent, outside; while Dover purchased only 158 dozen bunches, or 7 per cent of total purchases, outside. Manchester purchased 1,148 dozen bunches outside, or 16 per cent of its total purchases. It would seem that with the exception of a few towns such as Newport and Plymouth, the demand is well supplied by local farmers.

Of the total purchases of bunch carrots 19,465 dozen bunches, or 40 per cent, were imported, and 6,655 dozen bunches of these were brought in during the local harvest season, which was estimated to be from July 9 to October 1. Districts 3 and 4 were the heaviest purchasers of shipped-in bunch carrots. This is rather difficult to explain, but perhaps in many of the smaller centers no one is making a business of providing vegetables to the trade. As in the case of bunch beets there was great variation in different towns. Plymouth purchased 1,792 dozen bunches, or 84 per cent of its total purchases, outside; Newport, 4,415 dozen bunches, or 70 per cent; while Dover purchased only 147, or 6 per cent, outside.

There is little danger of loss due to overproduction since only those beets or carrots which are in demand need be harvested. The remainder can be allowed to mature and sold later as cut beets or cut carrots.

TABLE VII—*Beets (bunch) and carrots (bunch)—purchases by retail stores, hotels and camps from farmers and from others*

District	Beets (dozen bunches)				Carrots (dozen bunches)			
	From farmers	From others			From farmers	From others		
		Total	Competing season	Non-competing season		Total	Competing season	Non-competing season
1. Upper Coos	331	364	243	121	3	275	148	127
2. White Mt.	760	793	533	260	412	816	459	357
3. Lake Region	4,022	4,881	3,263	1,618	2,566	4,165	2,249	1,916
4. Sullivan	2,513	5,240	1,350	3,890	2,373	4,926	2,660	2,266
5. Cheshire	2,579	905	289	616	1,428	613	85	528
6. Merrimack Valley	15,033	6,861	1,892	4,969	16,184	6,268	770	5,498
7. Coast	7,502	2,611	595	2,016	6,687	2,402	284	2,118
Total	32,740	21,655	8,165	13,490	29,653	19,465	6,655	12,810

TOMATOES

New Hampshire growers are only furnishing a little more than one-half the demands of retail stores and hotels for fresh tomatoes during the year as a whole. In 1925 the imports amounted to 16,726 bushels, compared with 20,617 bushels purchased from farmers. During the period, however, when tomatoes can be produced without forcing in this state, which was estimated to be from August 15 to October 1 in southern New Hampshire and from August 22 to October 1 in northern New Hampshire, only 3,288 bushels came in from outside. This represents the average production from approximately 10 acres, whereas the total acreage in 1924 of

SEASONAL DISTRIBUTION OF TOMATO PURCHASES FROM OTHER THAN LOCAL FARMERS. BY THREE COMPANIES. 1925

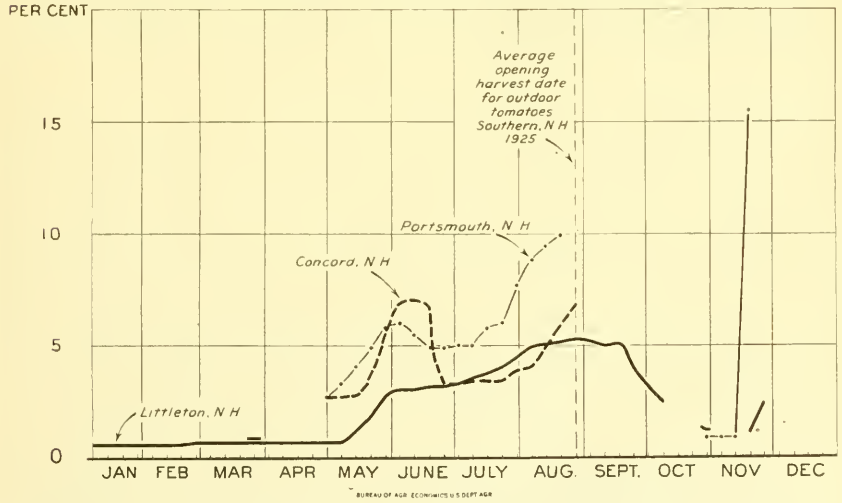

FIGURE 12—Tomato purchases from other than local farmers fall off quickly when local harvest begins.

TABLE VIII—*Tomatoes (bushels)—purchases by retail stores, hotels and camps, from farmers and from others*

District	From farmers	From others							
		Total for year	Competing season, week ending						Non-competing season
			Total	Aug. 15	Aug. 22	Aug. 29	Sept. 5	Sept. and Oct.	
1. Upper Coos	803	2,025	....	...	....	....	..	...	2,025
2. White Mt.	421	2,669	1,114	234	285	315	79	201	1,555
3. Lake Region	1,359	1,860	330	94	108	128	..	...	1,530
4. Sullivan	744	1,202	213	60	71	82	..	...	989
5. Cheshire	388	392	82	21	27	34	..	...	310
6. Merrimack Valley	13,495	7,074	1,259	355	417	487	..	...	5,815
7. Coast	3,407	1,504	290	140	150	....	..	...	1,214
Total	20,617	16,726	3,288	904	1,058	1,046	79	201	13,438

tomatoes produced for sale in New Hampshire according to the census was 123 acres. Even of these receipts, as shown in Figure 12, most come in during the first two or three weeks of the harvest season, and an increase in production to supply this demand would result in an increased supply later in the season, and probably lower prices. It is of interest to note in Table VIII that during the regular harvest season few tomatoes are shipped in.

Men interested in the welfare of New Hampshire tomato growers should, therefore, be very cautious about advocating expansion, so far as field culture is concerned, to supply New Hampshire markets.

There is, however, a large local demand, equal to nearly one-half of the purchases from other than local farmers, during that part of the harvesting season when tomatoes could be produced in this state in cold frames. There is no immediate danger of local growers oversupplying this market,

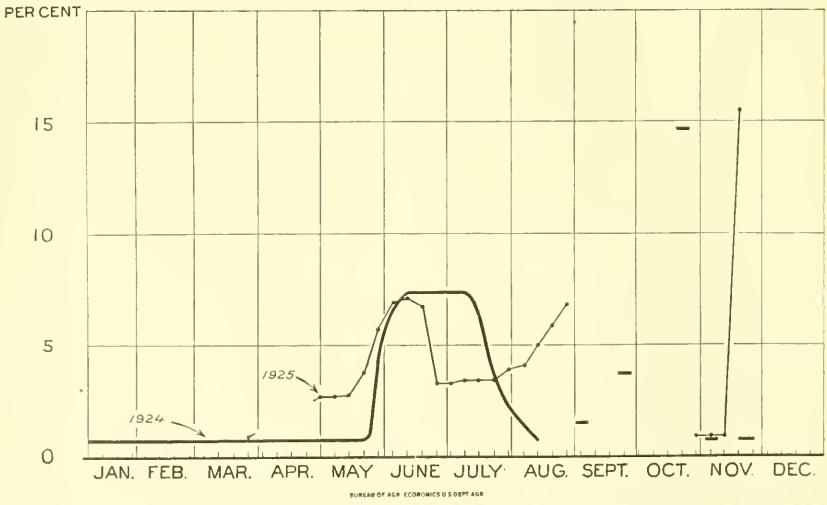
SEASONAL DISTRIBUTION OF TOMATO PURCHASES FROM OTHER THAN LOCAL FARMERS, BY ONE COMPANY IN CONCORD, N.H., 1924 AND 1925
PER CENT
15
10
5
0
1925
1924
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
BUREAU OF AGR. ECONOMICS U.S. DEPT. AGR.

FIGURE 13—The distribution of shipments in vary somewhat from year to year.

and an increase in production of tomatoes in cold frames should not cause materially lower prices than would otherwise have prevailed, but only replace a part of the supply now shipped in during July and August. There is a demand for these early tomatoes in all districts, as indicated in the imports shortly before the local harvest begins. See Figure 12.

The variations in purchases during two years by one company is shown in Figure 13. These variations are due, no doubt, to slight differences in the production situation locally and outside, and indicate in a way how delicately balanced the situation is, so far as field culture is concerned.

STRING BEANS

The New Hampshire string bean market is almost entirely supplied by local growers during the local harvest season, as shown in Table IX. The total imports amounted to 5,756 bushels for the entire year, compared with 9,278 bushels purchased from local farmers, but during the local harvest season, which was estimated to be from July 18 to October 1

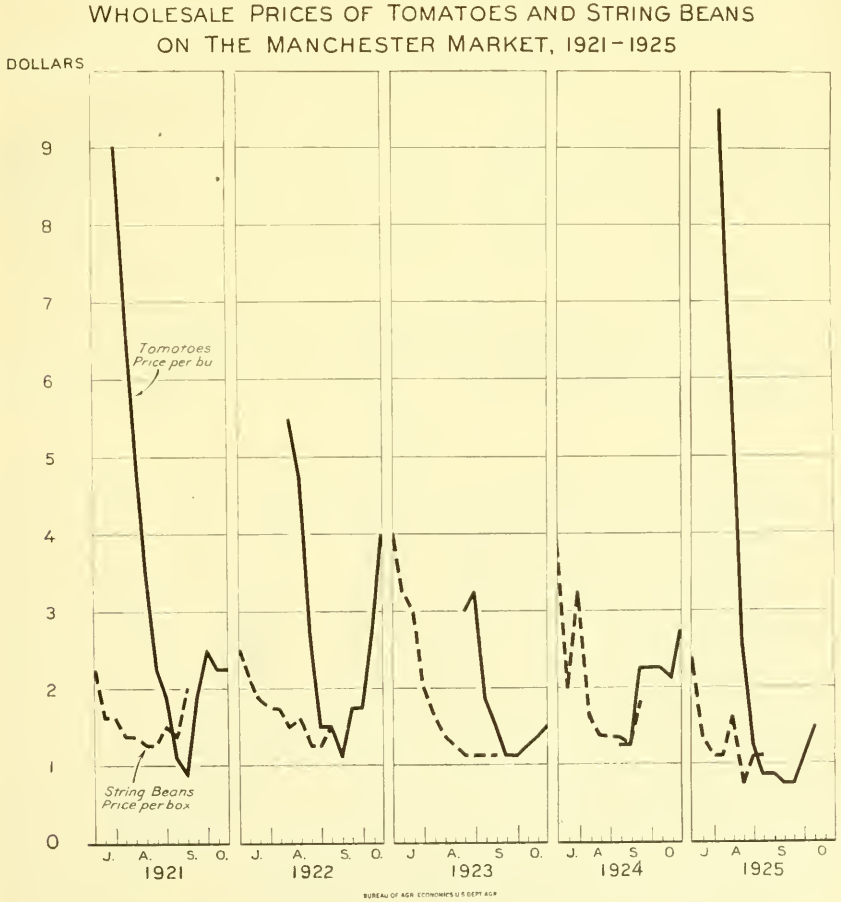

FIGURE 14—Tomatoes and string beans are usually high early in the season.

in northern New Hampshire and July 11 to October 1 in southern New Hampshire, only 1,475 bushels were purchased from outside.

In 1925 the Merrimack Valley (district 6) shipped in 590 bushels of string beans during the competing season, practically all of which came in before July 25. No one city seems to ship in a large quantity during the growing season. A study of the distribution of purchases by three retail companies indicates that a large part of the imports during the competing season occur in the early part of that season.

Since the yield of string beans from any one planting is very meager at the first week of harvest, any increase of production to supply this early string bean market would also cause increased local supplies during the principal market season where it is now almost entirely supplied by local

TABLE IX—*String beans (bushels)—purchases by retail stores, hotels and camps from farmers and from others*

District	From farmers	From others						
		Total for year	Competing season, week ending					Non-competing season
			Total	July 11	July 18	July 25	Aug. 1	Aug. 8	
1. Upper Coos	273	216	110	...	30	30	30	20	106
2. White Mt.	703	1,071	318	...	73	90	75	80	753
3. Lake Region	896	862	164	...	81	83	..	..	698
4. Sullivan	294	375	67	...	33	34	..	..	308
5. Cheshire	127	48	12	3	4	5	..	..	36
6. Merrimack Valley	5,157	2,393	590	157	217	216	..	..	1,803
7. Coast	1,828	791	214	108	106	...	..	..	577
Total	9,278	5,756	1,475	268	544	458	105	100	4,281

growers. The distribution of purchases by one company for two years indicates seasonal variations due to variations in local supplies.

Any increase in local production must, therefore, be shipped to outside markets or sold locally at prices lower than would otherwise have prevailed.

CELERY

Purchases of celery from other than local farmers were approximately 75 per cent of the total purchases. As shown in Table X, of the 25,707 crates shipped in 6,951 arrived during the local competing season, which was estimated to be from September 25 to January 1. During this time the farmers are supplying about 36 per cent of the total demand. District 6, the Merrimack Valley, shipped in nearly 3,000 crates during this time, which is equivalent to the production of about 8 acres with average yields. In each of the other districts the deficiency in local production represents only the production from one-half to two acres. As shown by the tables in the appendix, the stores of Keene purchased only 334 crates, or 17 per cent, from local farmers; Laconia, only 20 crates, or 4 per cent; Newport, 57 crates, or 10 per cent; Berlin, 100 crates, or 14 per cent; Dover, 753 crates, or 62 per cent, from farmers. It would seem that if the farmers of Dover can supply the demand a few farmers located around other towns could produce for their market. Perhaps somewhere in every district there are small areas of suitable soil.

It is very possible that increased local production with somewhat lower

prices would increase the consumption of this crop. The present demand with rather high prices is not necessarily indicative as to the extent of actual demand at lower prices.

ASPARAGUS

New Hampshire farmers supplied more than half the total retail store and hotel purchases of asparagus, as shown in Table X. Moreover, most of the outside purchases were made during the non-competing season, although receipts continued to come in during May and June, when the local product was on the market. In 1925, 14,361 dozen bunches, or the production from 35 acres with average yields, were shipped in during the

TABLE X—*Celery and asparagus—purchases by retail stores, hotels and camps, from farmers and from others*

District	Celery (crates)				Asparagus (dozen bunches)			
	From local farmers	From others			From local farmers	From others		
		Total	Competing season	Non-competing season		Total	Competing season	Non-competing season
1. Upper Coos	100	1,024	389	635	600	1,724	469	1,255
2. White Mt.	37	2,159	907	1,252	1,511	3,438	1,011	2,427
3. Lake Region	165	2,344	587	1,757	2,644	6,935	1,947	4,988
4. Sullivan	307	2,406	604	1,802	8,178	6,346	1,725	4,621
5. Cheshire	651	3,530	884	2,646	2,640	1,625	445	1,180
6. Merrimack Valley	5,776	11,886	2,985	8,901	22,960	16,656	4,548	12,108
7. Coast	1,793	2,358	595	1,763	14,283	6,331	4,216	2,115
Total	8,829	25,707	6,951	18,756	52,816	43,055	14,361	28,694

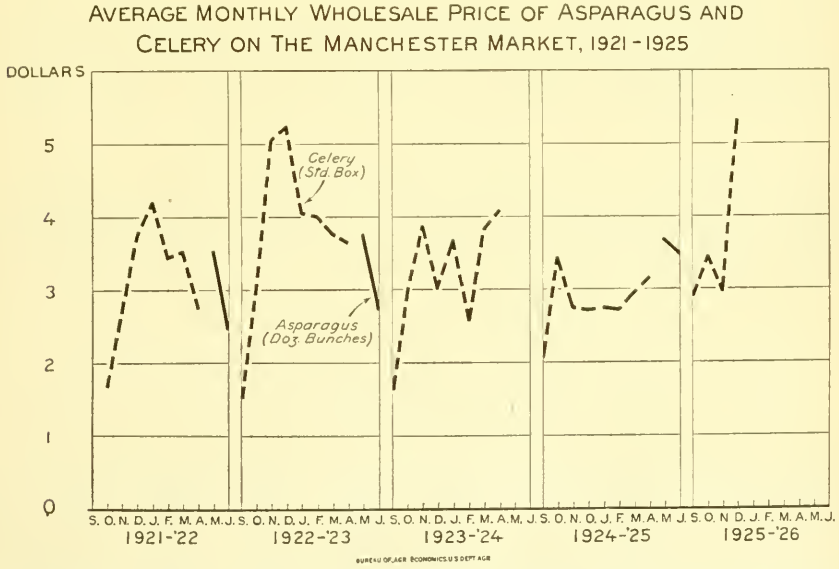
AVERAGE MONTHLY WHOLESALE PRICE OF ASPARAGUS AND CELERY ON THE MANCHESTER MARKET, 1921-1925
DOLLARS
5
4
3
2
1
0
Celery (Std. Box)
Asparagus (Doz. Bunches)
S. O. N. D. J. F. M. A. M. J. S. O. N. D. J. F. M. A. M. J. S. O. N. D. J. F. M. A. M. J. S. O. N. D. J. F. M. A. M. J. S. O. N. D. J. F. M. A. M. J. S. O. N. D. J. F. M. A. M. J.
1921-'22
1922-'23
1923-'24
1924-'25
1925-'26
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FIGURE 15—Celery and asparagus prices are usually steady. (Source of price data, New Hampshire Weekly Market Bulletin.)

competing season. This is estimated to be worth $30,000. The Merrimack Valley shipped in during the local harvesting season 4,548 dozen bunches, or 17 per cent of purchases during that period. District 7 shipped in 4,216 dozen bunches, or 23 per cent of its purchases. A slight increase in local production in districts 2, 3, 4, 6 and 7 should find a market by displacing shipped in products.

It is of interest to note that Dover stores purchased 2,942 dozen bunches, or 83 per cent of their total purchases, from farmers, while Laconia stores purchased only 300 dozen bunches, or 14 per cent of their total purchases, from farmers.

With somewhat lower prices it is probable that the demand for asparagus would be much greater. Any moderate increase would probably be absorbed by local consumption.

PEAS

Local farmers are supplying most of the demand for fresh peas. For the state as a whole, in 1925 the imports amounted to only 1,600 bushels, or 14 per cent of the total purchases by stores, as shown in Table XI. The Merrimack Valley (district 6) shipped in only 334 bushels, about 10 per cent of the total store purchases. The largest amounts shipped in were in districts 2 and 3, where the demand was due to the summer hotels. That production and demand are in a sensitive balance is shown by the fact that Manchester shipped in only 114 bushels, Concord 66 bushels, and Nashua 60 bushels during the entire season. Probably a small part of these were brought in during the competing season. The records of one large wholesale house show that most of the imports of peas arrive before the local peas are available or during the first week or two of local harvest.

In the case of peas it is thought that local demand would absorb any moderate increase of production, though perhaps at lower prices. Many hotels and restaurants did not use fresh peas on account of high cost.

CAULIFLOWER

About 43 per cent of the total purchases, or 5,527 boxes, of cauliflower were from other than farmers during the year 1925, as shown in Table XI. Probably less than half of these came in during the competing season.

TABLE XI—*Peas, cauliflower, cucumbers and spinach—purchases by retail stores, hotels and camps from farmers and from others*

District	Peas (bushels)		Cauliflower (bushels)		Cucumbers (bushels)		Spinach (barrels)	
	From farmers	From others	From farmers	From others	From farmers	From others	From farmers	From others
1. Upper Coos	211	50	377	92	862	1,220	6	425
2. White Mt.	1,778	482	413	601	296	1,075	616	545
3. Lake Region	1,642	346	463	667	757	1,543	325	1,592
4. Sullivan	535	60	320	825	256	1,384	238	778
5. Cheshire	539	135	616	900	285	576	477	2,047
6. Merrimack Valley	3,394	334	3,659	2,090	8,084	5,235	4,053	5,087
7. Coast	1,606	197	1,514	352	1,766	1,482	1,183	1,809
Total	9,705	1,604	7,362	5,527	12,306	12,515	6,898	12,283

Dover stores secured 455 boxes, or 88 per cent of their total purchases, from local farmers, while Hanover secured only 47 boxes, or 7 per cent of its total purchases, from local farmers, indicating that in certain places the demand was not well supplied locally.

An increase in production should be made with caution. In general, the demand during the local harvest season is pretty well supplied, although it is thought that any moderate increase in production could be absorbed by local consumption, perhaps at a lower price.

CUCUMBERS

As shown in Table XI, the purchases of cucumbers were about equally divided between those locally grown and those imported.

Most of these receipts from outside the state, however, come in before the local harvest season for field-grown cucumbers opens. In 1925 only from 20 to 30 per cent came in after July 15, when growers in districts 6 and 7 started harvesting. Many stores do not handle cucumbers when the local harvest can supply the demand. An increase in production during the early part of the season would also mean a much greater production during that part of the season now entirely supplied by local growers, and would probably result in frequent market gluts and extremely low prices.

There seems, however, to be a local market for cucumbers grown in cold frames and ready for harvest by the first of July. In 1925 from 40 to 50 per cent of cucumber receipts came in after that date in districts 6 and 7

SPINACH

About one-third of the spinach purchased by stores, as shown in Table XI, was grown by local farmers. Of the 12,283 barrels imported, a considerable portion came in during the early season before the local product was available. By the time the local spinach is ready for market, the large variety of fresh vegetables to choose from probably curtails the consumption of spinach.

It is interesting to note that the stores in district 1, Upper Coos county, handled very little spinach. The stores in the city of Berlin handled only 245 barrels, or .015 barrels per capita, while the stores in the city of Manchester handled .04 barrels per capita. The stores of Derry handled 511 barrels, or about .1 per capita. Concord stores handled 1,523 barrels, or .07 per capita. This indicates a possibility that local growers around some cities might increase sales by health publicity.

STRAWBERRIES, RASPBERRIES, BLACKBERRIES AND BLUEBERRIES

More than two-thirds of the total purchases of strawberries are shipped in from outside producing areas. (See Table XII.) In the northern part of the state, as indicated in districts 1 and 2, the local producers supply only a small part of the total.

Most of the receipts from outside come before the local season opens, as shown in Figure 2. It is estimated that only 1,138 crates out of a total of 29,730 came in during the local harvest season. Merrimack Valley brought in nearly 1,000 crates in the competing season.

It is interesting to note that the local producers of Dover furnished 660 crates, or 64 per cent of total purchases, that Portsmouth furnished 925 crates, or 61 per cent of total purchases, while the producers around Concord furnished only 468 crates, or 20 per cent of total purchases, and Manchester producers furnished 1,104 crates, or 20 per cent of the total purchases.

However, since 1925 was a very poor year for strawberries, too much emphasis should not be placed on the demand in any one city.

On account of the perishable quality of raspberries few are handled by stores. Most of those produced locally are probably sold direct to the consumer.

TABLE XII—*Berries—purchases by retail stores, hotels and camps from farmers and from others*

District	Strawberries				Raspberries		Blackberries		Blueberries	
	From farmers	From others			From farmers	From others	From farmers	From others	From farmers	From others
		Total	Competing season	Non-competing season						
1. Upper Coos	470	2,876	80	2,796	5	1	...	6	177	166
2. White Mt.	498	3,313	73	3,240	323	154	70	147	530	909
3. Lake Region	2,275	4,982	5	4,977	131	74	201	71	2,800	281
4. Sullivan	1,259	2,701	...	2,701	12	...	11	...	792	331
5. Cheshire	1,178	2,319	...	2,319	81	10	90	...	1,559	3
6. Merrimack Valley	5,408	11,238	957	10,281	59	...	102	3	4,747	66
7. Coast	3,185	2,301	23	2,278	38	7	47	...	1,465	168
Total	14,273	29,730	1,138	28,592	649	246	521	227	12,070	1,924

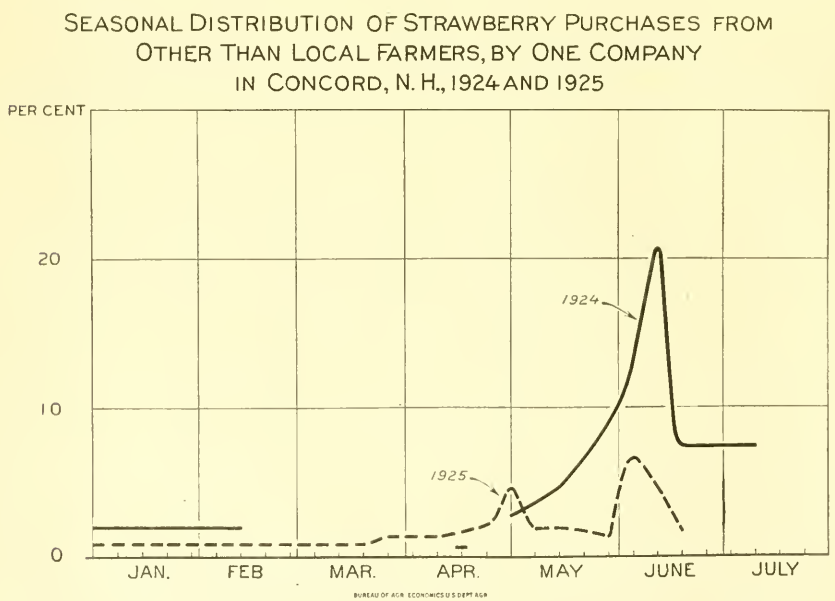

FIGURE 16—Seasonal supply and demand affect the distribution of purchases of strawberries.

Few blackberries are handled by local stores. The largest importers are the summer hotels.

Over 86 per cent of the blueberries are furnished by local producers.

The price received for strawberries in Manchester, Concord, and Boston during the harvest season since 1920 is shown in Figure 17.

Any increase in production probably must be sold in much the same local markets as at present at lower prices. Fluctuations in the production of berries during the early part of the local harvest season often have considerable effect upon the price received by local growers. In general, the price received in local markets will depend largely on the volume of local production. In this case demand and supply are so sensitively balanced that expansion in many areas should not be encouraged.

A large portion of the blueberries in New Hampshire grow wild in the pastures. The amount picked will, therefore, ordinarily depend upon the price and the wages of pickers.

A moderate increase in production of raspberries and blackberries in New Hampshire would not be likely to materially affect the price received. Very few raspberries were available, and the real demand is probably much larger than is indicated in purchases. It is, therefore, largely a production problem, since in many parts of the state special skill is necessary, due to winter injuries and diseases.

APPLES

New Hampshire apple growers are supplying directly about 70 per cent of the total apple purchases of retail stores and hotels. (See table XIII.)

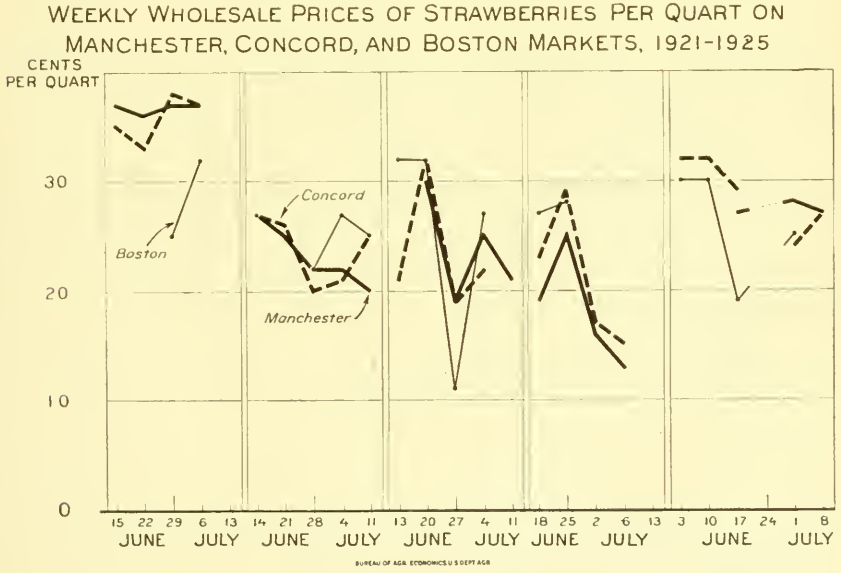
WEEKLY WHOLESALE PRICES OF STRAWBERRIES PER QUART ON MANCHESTER, CONCORD, AND BOSTON MARKETS, 1921-1925
CENTS PER QUART
30
20
10
0
Boston
Concord
Manchester
15 22 29 6 13 14 21 28 4 11 13 20 27 4 11 18 25 2 6 13 3 10 17 24 1 8
JUNE JULY JUNE JULY JUNE JULY JUNE JULY JUNE JULY
BUREAU OF AGR. ECONOMICS U.S. DEPT. AGR.

FIGURE 17—Strawberries vary greatly in price. The price is usually the lowest when the bulk of the local berries are being harvested. (Source of price data, New Hampshire Weekly Market Bulletin.)

Even during the competing season from September to April, 26,530 bushels of apples were purchased from other than local farmers.

TABLE XIII—*Apples—purchases in bushels by retail stores, hotels and camps from farmers and others*

District	From local farmers	From others
1. Upper Coos	4,827	6,556
2. White Mt.	1,313	8,149
3. Lake Region	7,177	3,438
4. Sullivan	5,184	4,624
5. Cheshire	2,975	3,135
6. Merrimack Valley	50,123	6,625
7. Coast	14,877	5,769
Total	86,476	38,296

The production of apples in the state, however, exceeds the amount consumed within the state by a wide margin. Records from the Bureau of Agricultural Economics of carlot shipments of apples from New Hampshire for four recent years are as follows:

Year	Carloads	Bushels at 500 bushels per car
1920	291	145,500
1921	335	167,500
1922	182	91,000
1923	310	155,000

The problem of New Hampshire's feeding itself is, therefore, mostly a marketing one. Most of the commercial apple crop is shipped to Boston as soon as harvested, and a large proportion is put in cold storage and sold later in the season. Some of these apples are probably reshipped to New Hampshire markets later in the winter. By better storage facilities local apples might profitably supply a larger part of the demand in late winter and spring, which is now satisfied by shipping from Boston.

Districts 1 and 2 ship in large quantities, since few apples are grown north of the White Mountains. At present a large part of these come from Maine.

The variation in apple purchases in different cities is shown in the following table:

City population	Bushels of apples purchased		Per cent from farmers
	From farmers	From others	
Concord (22,000)	7,914	1,423	85
Manchester (78,000)	14,258	3,683	80
Berlin (16,000)	4,611	2,132	68
Claremont (10,000)	2,070	2,795	43
Nashua (28,000)	11,992	901	93

A study of this table indicates that in the case of large cities in apple regions most of the apples are supplied locally, but that in the case of smaller cities away from apple production centers a large per cent is shipped in.

POULTRY AND EGGS

Chickens

A little more than half of the purchases of chickens by retail stores, camps and hotels were shipped in. Of the 969,800 pounds shipped in, about 41 per cent represents summer hotel purchases. In district 6, as shown in Table XIV, about two-thirds of the purchases were from local farmers. To what extent the shipments in are due to lower price or to lack of local supplies cannot be answered from the data obtained. There are indications, however, that more or less storage fowl comes to us at a lower price. Commercial poultrymen, who are catering largely to the

TABLE XIV—*Poultry, turkeys and eggs—purchases by retail stores, hotels and camps from local farmers and from others*

District	Chickens (pounds)		Turkeys (pounds)		Eggs (cases)	
	From farmers	From others	From farmers	From others	From farmers	From others
1. Upper Coos	27,965	14,990	380	3,115	1,764	6,944
2. White Mt	73,370	263,622	275	36,550	5,929	8,830
3. Lake Region	130,948	103,696	2,048	30,353	8,924	9,058
4. Sullivan	56,790	61,180	4,400	30,050	6,721	4,456
5. Cheshire	28,071	5,746	3,640	5,660	14,896	12,093
6. Merrimack Valley	516,734	244,027	2,394	123,849	17,533	32,536
7. Coast	132,575	276,579	850	25,970	7,065	8,118
Total	966,453	969,840	13,987	255,547	62,829	82,035

egg market, have few fowl to sell especially during late fall months when demand is especially good; consequently large amounts of western dressed fowl are shipped in.

The production of poultry in New Hampshire, however, no doubt exceeds the consumption within the state. A large number of broilers are shipped to Boston and New York every spring. Large quantities of fowl are also shipped to outside markets, especially in the spring and summer.

The poultryman is not supplying the local demand largely because the special broiler business and fresh egg business pay better.

Turkeys

About 14,000 pounds of turkey were purchased, as shown in Table XIV, from local farmers. This is about 5 per cent of the total purchases. A few cities near the Vermont line bought considerable amounts of turkeys from local farmers, but in the rest of the state the local supply was insignificant. Farmers are not meeting this demand largely because years ago heavy losses were incurred by disease, and since then the chicken

business has seemed to pay better. They have felt inclined to put the entire time on raising chickens. However, there is a demand for over a quarter of a million pounds of turkey that are now shipped in.

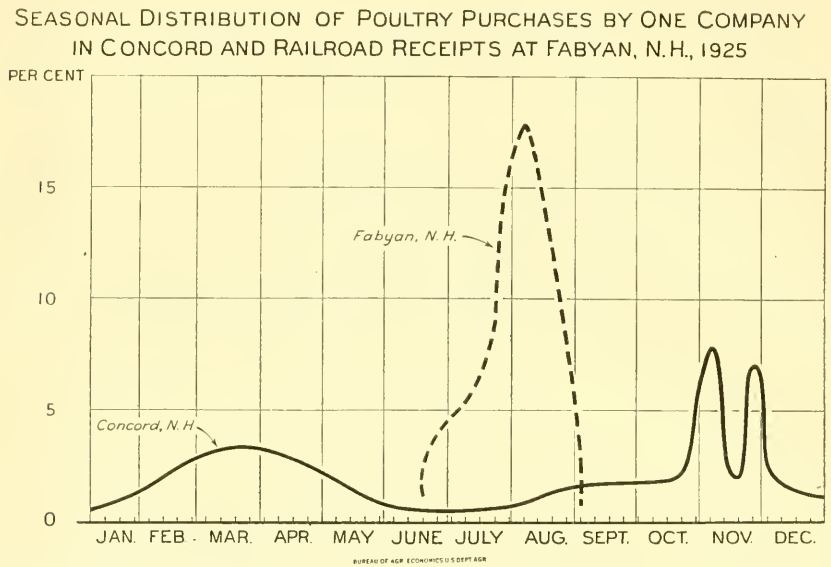
SEASONAL DISTRIBUTION OF POULTRY PURCHASES BY ONE COMPANY IN CONCORD AND RAILROAD RECEIPTS AT FABYAN, N.H., 1925
PER CENT
15
10
5
0
Fabyan, N.H.
Concord, N.H.
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
BUREAU OF AGR. ECONOMICS U.S. DEPT. AGR.

FIGURE 18—Railroad receipts of poultry at Fabyan indicate the distribution of demand by summer hotels.

Eggs

About 40 per cent of the eggs purchased by stores, camps and hotels in the state as a whole were produced by local farmers, as shown in Table XIV. In upper Coos county, however, only about 20 per cent of the eggs purchased were produced locally. The city of Berlin in this district, with no large farm area to draw on, bought 95 per cent from outside. District 4, which is largely rural, purchased about 60 per cent from farmers. On the other hand, in the Merrimac Valley district only about 35 per cent were purchased locally. Even where there is a surplus of eggs and large quantities are shipped out, some eggs are usually shipped in. This situation is due no doubt to the ability of the commercial plant operator to secure a special high-class market to the south. It would also seem as if the larger cities shipped in a larger proportion of eggs than small cities in the same district. This may be due to the effect of the chain store system, which is able to distribute western and storage eggs as well as shipped-in fresh eggs. The problem of egg production to supply the demand in New Hampshire markets is partially a marketing one. In the northern part of the state there is probably an actual deficiency of production, but it is doubtful if the prices offered would look attractive enough to encourage production on a commercial scale. A portion at least of the demand is for storage eggs. The southern part of the state is a surplus-producing region and a large volume of eggs are shipped to better

markets to the south. In many instances the commercial poultryman is getting a 5 cent to 7 cent per dozen premium above local markets by shipping to a high-class special market. It is probable that the New Hampshire producers are supplying the demand for high quality fresh eggs, and that the surplus is shipped out rather than to accept a low price in competition with the western and storage products.

BUTTER

About 94 per cent of the butter purchased was imported, as shown in Table XV. In all districts the local farmers furnish but a small part of the butter used. In the Merrimack Valley only 3 per cent of the purchases were from the farmers. Whole milk has paid so much better that the farmer who is favorably situated markets his dairy products as milk or cream. The butter shipped in represents the annual production of about 25,000 average cows.

TABLE XV—*Butter—purchases by retail stores, hotels and camps from local farmers and from others*

District	Butter (pounds)	
	From farmers	From others
1. Upper Coos	43,230	408,130
2. White Mt	71,524	396,255
3. Lake Region	81,997	698,708
4. Sullivan	109,015	475,812
5. Cheshire	26,545	143,555
6. Merrimack Valley	93,455	3,747,655
7. Coast	15,872	760,563
Total	441,638	6,630,678

WHITE MOUNTAIN HOTEL DISTRICT

Most of the summer hotels of New Hampshire are grouped in three distinct areas: White Mountains, Lake Sunapee, and the beaches. The beach hotels are pretty well supplied by local growers with products in season. The Sunapee Lake hotel region and the White Mountain hotels are similar as to demand and are not so well provided.

The hotels in the White Mountains may be divided into groups geographically: those in northern Carroll county, those in the Pemigewasset Valley and those in the Sugar Hill, Bethlehem, Whitefield and Crawford Notch area. The last of these are by far the largest group, and the demand here will be considered in some detail, under the White Mountain Hotel district.*

Tourists and summer guests begin coming to hotels in the White Mountains during the early part of June. This transient population increases rapidly until the latter part of August and then declines very abruptly, until by the middle of September practically all the guests are gone and the hotels closed.

* The White Mountain hotels in the Bethlehem-Crawford Notch area, represent 70 per cent, the Pemigewasset Valley hotels 10 per cent, and northern Carroll county 20 per cent of the total capacity of all White Mountain hotels. The demand in each case is similar, but purchases are proportionately smaller in the last two districts.

Vegetables

These hotels demand the highest quality of products since they cater especially to wealthy people. At present they order from wholesalers in Boston and are assured of deliveries within twenty-four hours. This is an easy and convenient way of obtaining their supply of vegetables. Some of the hotels combine their purchases and have them shipped in a special freight car which is set off at their closest station. In this way they obtain quick service at a low transportation cost. The advantage of this system is the opportunity to purchase large quantities from one source. The disadvantage is the condition of products as they arrive.

Market gardeners who hope to compete with Boston wholesalers in supplying these hotels must assure them of a regular supply of fresh vegetables of good quality. They probably would need to adopt many of the practices of wholesalers, and build up a reputation of always being

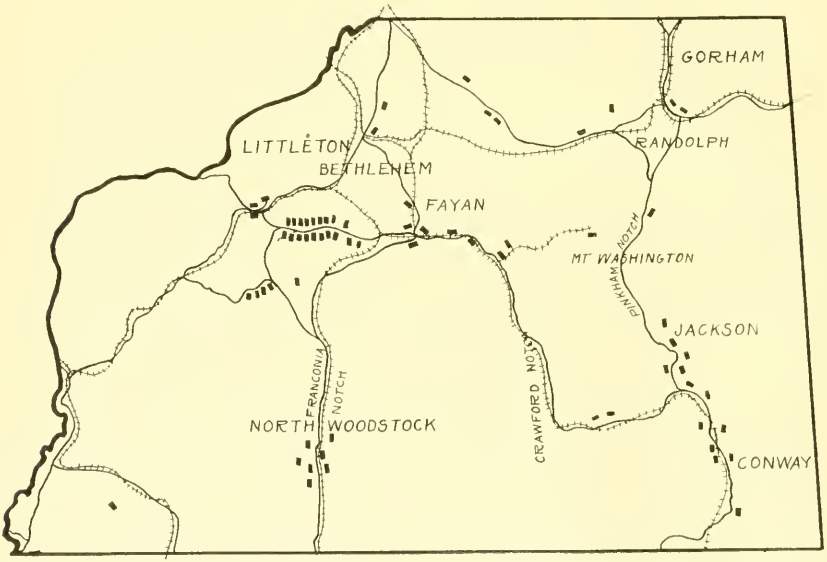

FIGURE 19—Map of White Mountain District showing approximate location of large hotels.

able to supply the demand of their hotel customers within twenty-four hours. If they do not have a sufficient supply in their own gardens to meet the demand of their regular customers, they should buy it from other local growers or from wholesalers. In other words, they would need to take over the entire business of supplying vegetables to the hotels. Such a business can be built up only by demonstrating ability to have the products wanted always available at a fair price. The total seasonal purchases from farmers and weekly purchases from others outside the district for most farm products purchased are shown in Table XVI. It will be noticed that local farmers supply only a small portion of the total consumption of these hotels. The estimated value of purchases from

local farmers is $42,000, while from others it is $80,000. Strawberries, cabbage, tomatoes, cucumbers, shell beans, apples, asparagus, onions and celery are practically all shipped in. A few products such as beets, carrots, cauliflower, spinach, string beans, peas, turnips, squash, potatoes and sweet corn are nearly half supplied by the farmers.

The seasonal trend of purchases is much the same for all products. In Figure 20 is shown the seasonal distribution of a few products, and the other products correspond very closely. This seasonal trend was estimated on the basis of freight receipts at Fabyan, N. H.

The normal hotel demand, as shown in Figure 20, for a few commodities in this area does not always correspond to the local harvesting season of vegetables. Planting dates must, therefore, be carefully worked out to meet the demand as closely as possible. Some provision must be made for marketing seasonal surpluses and for purchasing of products when local production is insufficient to meet the demand.

Large receipts of farm products from outside areas, however, do not

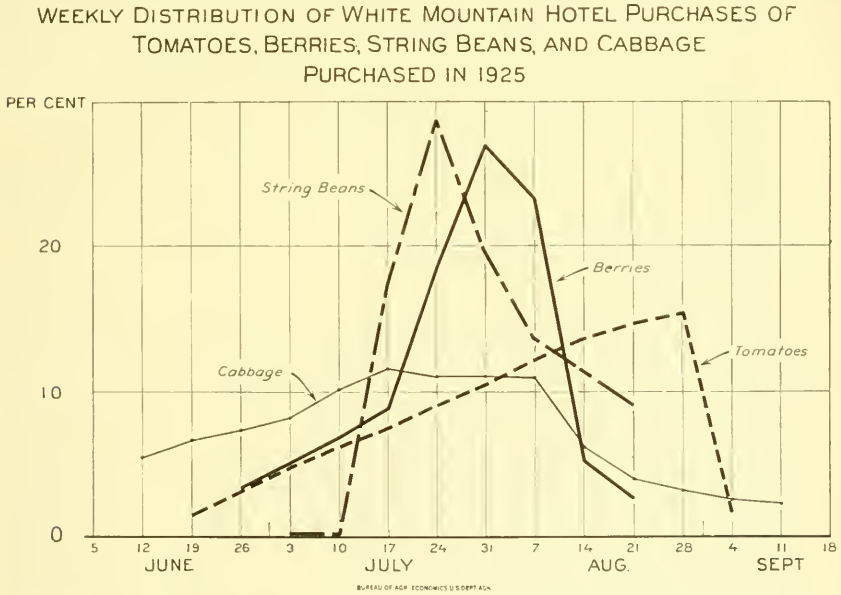

FIGURE 20—Demand for vegetables in summer hotels is greatest in the middle of July.

mean that local farmers can profitably supply this market. Production costs, as well as price received, must be considered.

There are at present a few commercial gardeners producing for these hotels. In fact, several years ago a co-operative arrangement was entered into by a group of farmers to market vegetables. This failed largely because the producers did not grow the products in sufficient quantity to keep a regular supply available. Most of the farms supplying vegetables for this region are located in the Connecticut River Valley, where the growing season is fairly long. The soil here is well suited to vegetable

TABLE XVI—*Purchases by White Mountain hotels of various commodities from local farmers and from others, by weeks, for the year 1925*

Commodity	From local farmers	From others, week ending													
		Total	June 12	June 19	June 26	July 3	July 10	July 17	July 24	July 31	Aug. 7	Aug. 14	Aug. 21	Aug. 28	Sept. 4	Sept. 11
Strawberries* (crates)	184	694	..	..	64	93	125	163	166	83	..	..	..	..	..	..
Blackberries* (crates)	65	147	..	..	..	..	..	..	22	52	55	11	7	..	..	..
Raspberries* (crates)	318	144	..	..	..	..	..	..	22	51	53	12	6	..	..	..
Blueberries* (crates)	351	668	..	..	..	..	..	..	101	236	248	53	30	..	..	..
Cabbage (bbls.)	331	1,278	70	86	95	105	129	145	141	141	138	79	50	40	31	28
Tomatoes (boxes)	345	1,715	..	25	54	81	106	128	154	178	209	234	253	264	29	..
Beets (doz. bunches)	471	49	1	1	2	4	4	4	5	11	4	3	4	2	2	2
Carrots (doz. bunches)	158	118	5	5	6	10	10	12	13	14	13	12	10	8	..	..
Cucumbers (boxes)	240	537	..	..	..	19	27	30	39	48	64	70	78	78	84	..
Cauliflower (boxes)	328	425	..	..	12	14	15	31	59	71	66	56	48	35	18	..
Beets† (bus.)	381	337	4	6	8	60	46	14	41	26	44	25	11	16	15	21
Spinach (bbls.)	564	236	..	..	5	6	21	35	53	57	59	..	..	..	..	..
String beans (bus.)	640	728	..	..	..	1	1	129	209	143	99	81	65	..	..	..
Shell beans (bus.)	57	147	..	..	..	5	5	26	34	28	20	17	12	..	..	..
Apples (boxes)	359	1,104	..	..	43	43	43	52	74	134	203	241	144	86	40	1
Chickens (lbs.)	54,720	260,422	..	2,630	8,015	12,025	13,011	16,020	20,305	38,100	40,700	39,500	30,800	20,000	19,316	..
Turkeys (lbs.)	..	36,000	..	390	1,401	1,692	1,872	2,376	3,240	5,652	6,408	5,580	4,284	2,808	288	..
Carrots† (bus.)	430	342	18	14	17	25	30	35	39	40	37	34	29	24	..	..
Peas (bus.)	1,470	328	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Asparagus (bunches)	81	1,619	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Parsnips (bus.)	42	289	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Turnips (bus.)	1,032	264	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Squash (100 lbs.)	139	265	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Potatoes (bus.)	10,406	4,632	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Onions (bags)	24	980	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Celery (boxes)	20	1,472	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sweet Corn (10 doz.)	736	1,122	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pears (boxes)	..	523	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Butter (tubs)	156	2,177	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Eggs (cases)	1,450	7,070	..	..	..	..	..	..	..	..	..	..	..	..	..	..

* Distribution based on receipts of all berries and harvesting dates of each kind of berries.
† Distribution of total purchases same as for beets (bunch) and carrots (bunch) respectively.

production, and any increase in production for the White Mountain hotel market is likely to be in this part of the district.

It is evident from even a hasty survey of the situation that the individuals who attempt to supply this market must have considerable business ability as well as special skill in market gardening. Planting dates for each vegetable must be carefully worked out in order to supply the market with the least surplus. The truck farm organization and acreage of each crop must also be considered with relation to the amount and time of labor demands.

Poultry

Local farmers furnish only a small part of the poultry and eggs purchased by summer hotels in the White Mountain area, as shown in Table XVI. In 1925 the hotels in district 2 purchased 54,720 pounds of poultry, no turkey and 1,450 cases of eggs from local farmers, compared to 260,422 pounds of poultry, 36,000 pounds of turkey and 7,070 cases of eggs purchased from others.

The purchases of poultry from other than local farmers, according to the estimates of a few hotels, consist of the following kinds:

	Per cent	Pounds
Broilers	32	82,700
Roasters	24	62,800
Fowl	44	114,900
Total	100	260,400

The trend of weekly purchases of poultry from other than local farmers in the White Mountain district is shown in Figure 18. The estimated amounts of these weekly purchases are shown in Table XVI. Purchases of eggs would probably follow the same weekly trend, as in the case of vegetables. The hotels must purchase from a source where the supply is dependable. They have not been able to depend on the local farmers to supply this demand and have, therefore, shipped in most of it from Boston. Many of the hotels use from 5,000 to 10,000 pounds of poultry per season. They want dressed instead of live poultry, because it is much easier to handle and less expensive under their conditions.

Although this large demand is for only a limited period of two months per season, it may be entirely possible for commercial poultrymen to meet the situation either by shipments from poultry centers in southern New Hampshire or by men located within the district. The first would be a marketing problem in the establishment of a centralized agency to gather, ship and dress, and deliver poultry as needed. The second would require a production program of establishing well-organized poultry farms near the hotels. Both methods are worthy of study.

PROBLEMS OF MARKETING

If the New Hampshire farmer is to supply a larger per cent of the products consumed in the state, or even to hold the present market in the face

of ever keener competition, he must solve some of the difficulties that now obtain. In the course of the personal calls on over 1,200 stores and 300 hotels, many problems were suggested by retailers and others, and it would seem that a review of some of these would be in order here.

1. *Quality.* Some of the retailers catering particularly to a special market ship in certain vegetables, because the local products will not satisfy this high-class trade. So while the figures may show that the producer nearly supplies certain markets, there is, after all, a production problem in getting high quality products to certain stores. The skilled gardener grows more than the trade actually needs and sells only that which will look attractive.

The attractiveness of the products, however, is not entirely in the hands of the farmer. In visiting the 1,200 stores the investigators noted great differences in the display of vegetables. In some cases stores had featured vegetables, and people purchased these commodities because the methods of display made them look appetizing. On the other hand, there is a demand, especially at certain seasons, for low quality products, such as storage eggs, on account of low prices.

2. *Quantity.* The retailer is primarily concerned with selling, and feels that his main energy should be spent in working out merchandising methods. He does not have the time to deal with a large number of very small farmers who bring in small amounts of vegetables. He frequently states that the cost of buying under these conditions is too high. If he needs something, he can order from one source and know that it will be delivered.

If the local producer wishes to sell to the larger stores he must produce in sufficient quantities to really establish and hold the market. The retailer sometimes ships in products because he has less trouble with his trade when he has uniform quality products over a period of time. If he should have some especially fine local products one day and a poor quality the next day, his trade would be dissatisfied. Many of the retailers discouraged the production of vegetables in small units on this account. With each producer marketing only small amounts it is difficult to ship to other markets in case of oversupply on the local market.

Systematic Marketing

Many retailers claimed that they were not always able to buy local supplies to meet the demand because farmers were unwilling to market regularly. Of course, if the farmer prefers not to sell potatoes this week the retailer must get them elsewhere, and if the retailer ships in potatoes this week there may be a surplus later in the season. When production and consumption are in a delicate balance the shipping in of a few carloads may cause all local potatoes to be marketed at a lower price.

The systematic marketing of farm products brings up the whole question of storage of products either on farms or in public storage houses. Certain crops by special storage methods can be held for special markets. Celery can, no doubt, be stored for the holiday trade. Many of these questions will have to be worked out if we are to supply more of our own market. According to other retailers, the local products are not well distributed as to harvest time. This situation could be helped somewhat by more care on the part of farmers to make several plantings.

Relations between Producer and Retailer

The relations between producer and retailer in most instances are happy and businesslike. The retailers as a class were sympathetic and interested in solving the difficulties of local production to supply the market. However, since the many retailers buy from many farmers, many things happen that approach sharp practice and which serve to discourage local production.

For instance, a retailer buys from a farmer paying market prices for a certain commodity only to find that his competitor purchased the same thing, the same day, and from the same farmer at a much lower price, which enabled him to feature this commodity at a low price. Naturally on the next occasion the first retailer attempts to buy below the market price, in order to protect himself. This sort of procedure in different variations means losses for both producers and retailer. In some instances it has become the practice for both retailer and producer to falsify concerning prices and demand.

Contrasted with this condition is a market gardener who sells to the retailers at the market price. Through favorable experience they have come to respect his business ethics. They know that they will all be treated alike and that the price will be about right considering local supplies and Boston market. The retailer collects a margin above cost and is satisfied. The producer gets a fair price and in the end the consumer is better served.

To build up such relationships as this is good business judgment.

Price

Many retailers, who were especially interested in this whole problem, stated that many times they were forced to buy outside because the local producer was unwilling to adjust himself to the Boston market. In the keen competition between rival stores they found it necessary to ship in vegetables to hold their customers, for a rival store underselling vegetables would draw trade.

Since the demand for vegetables during the competing season is pretty well supplied by local producers, it is more often a problem of lowering the cost of growing the vegetables now sold than in growing more. Ordinarily at present the vegetables are grown in small units and with methods that require much labor. While vegetables will require considerable labor per unit of product, the use of the most modern equipment and best methods should lead to lower costs.

Criticism of Retailer

The greatest criticism heard against the retailer was that occasionally he may break the local market by shipping quantities of certain products at harvest time. Sometimes it is claimed this is done to secure a supply for storage at a low price, but more often it is merely the individual retailer's method of advertising or drawing attention to his store. That he may lose money on every unit sold does not seem to concern him if this loss results in larger sales of other products. He little realizes that tampering with the market in the case of a crop like strawberries works

an injustice on the local producer and in the long run discourages local production and makes prices higher to the consumer. It probably works little hardship on year-round manufacturers when a product is put on sale by retailers at a loss; but in the case of strawberries and other crops where the results of a year's work are put on the market within a brief time, the local producer may have to accept prices below the actual market possibilities. Thus, the retailer, in jockeying for a position of advantage over other retailers, often discourages local production.

NEED OF FURTHER STUDY

As stated in the introduction, this study was intended only as a preliminary survey to get a general picture of the situation. From a study of this survey it would seem that there are several outstanding problems which require detailed study and analysis.

1. Under what conditions can our producers afford to meet the market demand for potatoes? Large amounts are being shipped in. Is it feasible or practical to grow them locally?
2. Large quantities of poultry are being shipped in to summer hotels. Would this demand be attractive to our producers? Could they furnish poultry for this market? What is the best way to supply this large demand?
3. Can local producers profitably supply the White Mountain vegetable demand?
4. There is a demand for celery in nearly every district of the state. Can this be grown locally to better meet the demand? Can the demand for local products be further accentuated by storing for holiday trade?
5. Can the demand for cabbage be profitably supplied by local producers? And after supplying the local demand can cabbage be profitably grown for outside markets?
6. Can the vegetables which now practically fill the demand be grown with less labor and perhaps by fewer men?
7. Can the New Hampshire producers profitably force cucumbers, tomatoes and other vegetables in order to take advantage of the early price?
8. Can local farmers produce dry onions in competition with present production areas?
9. To what extent can we afford to meet the demand for dry beans?
10. What can be done to accelerate the marketing of local products? How can better trade relations be established between producer and retailer? How can unfair practices on the part of either retailer or producer be changed?

These questions raise problems that cannot be adequately discussed in this study on account of lack of definite information. It is important that studies be made to secure such information as is necessary to satisfactorily discuss the problems. This will involve commodity studies in production and marketing under our conditions. In the case of potatoes, a survey of the conditions on 500 farms producing potatoes for the market should indicate not only something as to cost of production under varying

conditions and the feasibility of producing potatoes, but also may suggest changes in method which will enable the farmer to supply the market profitably.

The problem of the White Mountain situation will involve a study of quality demanded, prices paid, willingness of hotel managers and stewards to purchase locally, and also possible methods of supplying the demand.

The need of a detailed study of such production and marketing conditions as enable some local producers to supply a large part of the products used is also apparent. The district around Dover seems to be handling this situation especially well, and a study of conditions on that market should reveal some facts of significance for other centers.

TABLE XVII—*Estimated percentages of shipped-in products by stores during the competing season as compared to total purchases from others. An approximate idea of the situation in any one city in the tables on the following pages may be had by multiplying the total shipped in by the percentages for that district*

Commodity	District 1	District 2	District 3	District 4	District 5	District 6	District 7
Potatoes	85	85	63	69	69	74	56
Cabbage	78	76	78	34	66	34	51
Tomatoes	..	35	19	19	19	19	1
String beans	51	50	18	18	18	25	2
Strawberries	3	3	..	..	..	15	

TABLE XVIII—*Purchases of agricultural products in sixteen New Hampshire cities and towns by retail stores from farmers and from others in 1925*

Commodity	Unit	Manchester		Nashua		Concord		Portsmouth	
		From farmers	From others	From farmers	From others	From farmers	From others	From farmers	From others
Potatoes	Bus.	6,394	100,125	8,066	42,177	12,262	25,099	11,806	16,492
Cabbage	Bbls.	3,980	1,880	2,090	424	1,410	319	887	349
Beets	Bus.	1,768	288	1,616	35	346	414	158	29
Carrots	Bus.	3,679	537	1,858	72	289	596	505	86
Turnips	Bus.	449	3,992	1,590	191	480	516	257	514
Parsnips	Bus.	663	339	578	20	140	552	281	67
Sweet corn	10 doz.	6,426	270	4,661	20	1,407	50	1,532	15
Dry beans	100 lbs.	25	5,825	....	2,990	56	2,007	35	1,220
Dry onions	100 lbs.	62	8,343	....	3,466	20	2,962	381	1,448
Squash	100 lbs.	1,398	61	850	7	1,047	68	626	71
Tomatoes	Bus.	5,466	3,318	3,754	1,571	1,315	541	749	493
String beans	Bus.	2,056	808	1,204	410	413	586	492	224
Peas	Bus.	806	114	679	60	603	66	465	86
Cauliflower	Boxes	1,111	592	624	279	1,018	746	569	135
Cucumbers	Bus.	3,566	2,085	1,941	908	319	763	490	337
Beets (bunch)	Doz. bunches	6,180	1,148	2,356	918	2,257	1,695	2,187	937
Carrots (bunch)	Doz. bunches	8,154	1,466	2,384	848	3,274	1,657	1,647	683
Spinach	Bbls.	2,462	1,608	834	844	339	1,184	584	765
Shell beans	Bus.	698	97	732	50	257	134	363	5
Celery	Crates	3,699	4,044	463	2,631	418	2,004	623	408
Asparagus	Doz. bunches	5,518	7,312	8,991	1,765	2,774	3,464	9,152	6,944
Butter	Lbs.	200	1,709,833	2,500	642,900	490	384,158	....	200,135
Eggs	Cases	2,970	14,880	2,735	7,338	1,880	3,061	1,101	1,799
Chickens	Lbs.	193,365	68,375	130,890	31,343	42,271	19,015	59,575	22,925
Turkeys	Lbs.	500	31,720	....	32,930	600	18,878	....	....
Strawberries	Crates	1,104	4,310	1,308	1,610	468	1,902	925	594
Raspberries	Crates	50	30	....	....	11	....	25	....
Blackberries	Crates	56	....	....	....	6	3	45	....
Blueberries	Crates	1,475	21	786	3	565	4	438	67
Apples	Bus.	14,258	3,683	11,992	901	7,914	424	6,730	495

Commodity	Unit	Berlin		Dover		Keene		Laconia	
		From farmers	From others	From farmers	From others	From farmers	From others	From farmers	From others
Potatoes	Bus.	12,300	11,835	7,937	17,028	3,590	18,566	7,592	17,696
Cabbage	Bbls.	175	2,409	763	152	498	355	560	302
Beets	Bus.	103	251	371	12	209	80	238	112
Carrots	Bus.	113	719	422	105	281	174	252	164
Turnips	Bus.	475	1,025	600	118	418	261	255	136
Parsnips	Bus.	....	50	211	32	152	112	27	140
Sweet corn	10 doz.	2,229	50	1,385	....	1,250	150	1,388	....
Dry beans	100 lbs.	....	1,578	17	1,928	31	1,576	36	1,068
Dry onions	100 lbs.	....	1,751	76	1,574	476	1,716	....	1,895
Squash	100 lbs.	107	186	387	19	410	12	132	66
Tomatoes	Bus.	755	1,763	843	355	250	179	318	271
String beans	Bus.	180	153	423	160	....	....	101	217
Peas	Bus.	80	10	351	25	296	44	265	15
Cauliflower	Boxes	346	35	455	64	26	18	154	178
Cucumbers	Bus.	747	902	349	303	252	244	182	259
Beets (bunch)	Doz. bunches	331	104	2,138	158	1,572	620	494	322
Carrots (bunch)	Doz. bunches	....	....	2,419	147	1,348	406	375	357
Spinach	Bbls.	6	239	289	272	180	682	100	470
Shell beans	Bus.	12	18	148	....	276	325	132	30
Celery	Crates	100	630	753	461	334	1,680	20	489
Asparagus	Doz. bunches	600	1,600	2,942	5,596	108	92	300	1,895
Butter	Lbs.	....	290,800	4,000	206,798	1,750	163,750	14,100	243,876
Eggs	Cases	285	5,098	2,076	1,840	357	1,267	1,459	1,876
Chickens	Lbs.	11,600	5,750	19,375	11,995	16,131	2,500	29,850	4,600
Turkeys	Lbs.	....	2,100	850	2,350	6,500	12,908	300	3,380
Strawberries	Crates	465	1,390	660	371	750	1,474	490	1,682
Raspberries	Crates	....	....	....	....	80	....	10	....
Blackberries	Crates	....	....	....	....	41	....	5	....
Blueberries	Crates	163	60	460	....	1,279	....	501	
Apples	Bus.	4,611	2,132	3,300	4,703	1,062	462	2,151	50

TABLE XVIII—*Purchases of agricultural products (continued)*

Commodity	Unit	Rochester		Claremont		Somersworth		Franklin	
		From farmers	From others	From farmers	From others	From farmers	From others	From farmers	From others
Potatoes	Bus.	2,622	3,913	3,015	10,565	2,964	6,046	1,850	190
Cabbage	Bbls.	4,204	629	193	33	2,702	....	5	5
Beets	Bus.	58	37	105	80	150	....	5	....
Carrots	Bus.	139	23	90	80	166	5	2	....
Turnips	Bus.	135	41	323	128	184	30	....	10
Parsnips	Bus.	30	60	113	99	57	3	....	5
Sweet corn	10 doz.	365	11	710	....	461	....	3	....
Dry beans	100 lbs.	....	48,300	3,108	157,607	395	45,405	700	9,110
Dry onions	100 lbs.	45	55	5	895	....	188	....	203
Squash	100 lbs.	85	14	291	31	91	....	22	....
Tomatoes	Bus.	635	87	171	79	242	41	7	....
String beans	Bus.	251	110	213	156	183	70	....	....
Peas	Bus.	125	41	109	....	96	....	5	....
Cauliflower	Boxes	251	13	82	22	55	3	4	3
Cucumbers	Bus.	103	118	102	138	203	42	1	....
Beets	Doz. bunches	580	212	449	25	172	....	....	....
Carrots	Doz. bunches	524	233	369	25	165	1	....	....
Spinach	Bbls.	52	92	84	138	72	10	....	20
Shell beans	Bus.	45	....	44	6	47	....	....	....
Celery	Crates	....	456	170	295	99	100	1	26
Asparagus	Doz. bunches	418	1,025	1,890	130	30	....	....	....
Butter	Lbs.	162	74,088	48,530	232,670	....	55,300	7,800	4,450
Eggs	Cases	551	729	3,226	1,076	214	567	653	....
Chickens	Lbs.	11,380	2,620	27,225	1,250	7,880	2,920	100	....
Turkeys	Lbs.	....	....	3,550	4,700	....	....	....	....
Strawberries	Crates	171	385	761	1,145	343	3	29	31
Raspberries	Crates	....	....	9	....	....	....	....	....
Blackberries	Crates	....	....	6	....	....	....	....	....
Blueberries	Crates	82	....	138	....	25	....	207	....
Apples	Bus.	640	106	2,070	2,795	699	44	....	65

Commodity	Unit	Lebanon		Newport		Plymouth		Derry	
		From farmers	From others	From farmers	From others	From farmers	From others	From farmers	From others
Potatoes	Bus.	6,985	2,725	5,400	5,470	1,430	2,120	2,420	7,238
Cabbage	Bbls.	95	258	200	62	320	250	317	145
Beets	Bus.	49	90	327	30	113	67	118	21
Carrots	Bus.	70	90	257	95	89	71	158	21
Turnips	Bus.	45	164	156	75	54	160	116	154
Parsnips	Bus.	24	82	62	57	16	84	29	120
Sweet corn	Bus.	285	162	570	255	453	6	661	....
Dry beans	100 lbs.	8,200	66,350	3,108	157,607	1,240	14,960	700	93,985
Dry onions	100 lbs.	....	547	....	794	....	100	107	1,091
Squash	100 lbs.	167	30	155	29	102	120	175	10
Tomatoes	Bus.	92	106	320	196	137	311	447	350
String beans	Bus.	42	61	96	123	35	125	79	107
Peas	Bus.	73	15	208	5	78	42	178	....
Cauliflower	Boxes	91	51	83	33	29	42	159	128
Cucumbers	Bus.	38	165	72	795	75	295	190	301
Beets (bunch)	Doz. bunches	50	225	1,797	4,560	700	1,787	1,250	1,051
Carrots (bunch)	Doz. bunches	52	158	1,825	4,415	330	1,792	250	100
Spinach	Bbls.	11	199	100	213	3	137	50	461
Shell Beans	Bus.	22	15	21	6	1	55	140	....
Celery	Crates	....	336	57	530	....	160	....	613
Asparagus	Doz. bunches	621	706	1,782	3,225	50	125	700	750
Butter	Lbs.	50,670	76,742	22,750	80,800	1,230	15,970	500	145,150
Eggs	Cases	886	881	1,548	320	214	108	825	873
Chickens	Lbs.	16,825	2,000	13,825	750	9,700	500	38,100	2,000
Turkeys	Lbs.	450	1,920	2,300	....	....	....	....	....
Strawberries	Crates	203	461	209	647	116	488	354	582
Raspberries	Crates	....	....	....	....	....	....	....	1
Blackberries	Crates	....	....	3	....	....	....	....	....
Blueberries	Crates	215	100	201	....	164	....	186	....
Apples	Bus.	1,579	699	1,125	1,220	687	383	3,505	115